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Artificial Fuel.

Mr. Barker, of London, has recently patented further improvements in the manufacture of artificial fuel, whereby its combustible properties are greatly increased, while the blocks into which the fuel is divided are impervious to moisture. The blocks, after being dried, are dipped into some of the various oils obtained by direct distillation of coal, petroleum, paraffine oile, carbonic acid, naphta and pyrotigneous acid. Besides increasing the combustible power of the fuel, it utilizes many of these materials. The fuel thus prepared may be carried in water-proof tanks filled, or partially filled, with water, which prevents spontaneous combustion without injuring the fuel. In fact the cold water solidifies such substances as petroleum, which may have been absorbed by the fuel. To make the fuel completely water-proof, it is submitted to the following process: One part of pitch, or other analogous vegetable resinous substance, is mixed with two parts of coal oil or other analogous oil, and two parts of gas or other tar. Such proportions, however, are not absolutely essential, but may be varied to suit the requirements of each particular case, and with which the operator will be familiar. The said last-mentioned ingredients are heated together until they are thoroughly united, when the mixture is ready for use. The blocks of fuel are then dipped into the liquid thus prepared, and are afterwards covered with a thin coating of charcoal dust, or other pulverized substance or substances, which will not interfere with the combustible nature of the fuel, the object of such coating being to prevent adhesion of the blocks.

Coppering Iron.

A new process for this purpose is patented by a Mr. Bernabé, giving, as represented by those who have examined it, an inseparable cohesion of the metals, and what is more novel, if true, at an expense little greater than the cost by weight of the copper deposited. The foreign reports state that the perfect adhesion of copper to iron is a new achievement in electro-metallurgy. This is an error. We are not certain how it may be in Europe, but in this country, where electro-metallurgy has been practiced in some of its applications to a greater extent than in any other, the electroplating of iron with copper is done as perfectly as that of any other metal. The expense of the chemicals required, with that of cleansing the iron of oxides, has hitherto rendered coppered iron more expensive than copper, in thin plates: and if this expensiveness has been overcome, as represented, the invention will be of immense value. Iron ships, for example, would be relieved of one of their two great disadvantages—that of fouling—as compared with wood; for we presume there would be no difficulty in hardening the porous copper deposited in this way, by rolling the plates.—*Scientific American.*

Lighting Mines.

Most of our readers are aware of the great dangers to which miners are exposed by the falling in of the roofs of mines. If some means of detecting the weakness of the roofs was generally known, it would save many valuable lives. Nothing could enable mine superintendents to do this so completely as a brilliant light, and this is supplied by the magnesium lamp, which has lately been brought before the public. This lamp is very convenient, and throws a most brilliant light. A spirit-flame is used to ignite the magnesium, and as the flow of the powder can be instantly stopped and recommenced, there is every facility for securing economy, by using the light only during the precise period when it is required. The magnesium is used in the shape of granulated crude metal, either alone, or being diluted by being mixed with sand in varying proportions, according to the volume of light required. It is necessary that the powder should be kept beyond the reach of the atmosphere, to prevent deterioration, but this presents no difficulty to the consumer, as it is supplied in suitable cases. The light is well worthy the attention of surveyors, inspectors, and managers of all kinds of mines, and is not excessively costly for the special purposes indicated. It is not heavier than the ordinary Davy, and has no clock-work, &c., to get out of order.

Change in the Mint Laws of the United States.

The following letter, addressed to Mr. Knox, of the Treasury Department, by Mr. Louis A. Garnett, of San Francisco, formerly connected with the branch mint in that city, and at present with a large silver refinery, was presented to the Senate by the Secretary of the Treasury, in reply to a resolution introduced by Senator Conness, asking for information relative to proposed changes in the Mint Laws:

As an indication of the magnitude of our mining interests, I will here merely premise that it would be an underestimate to say that the mines of this State, and the adjacent Territories which are tributary to it, have for the past seventeen years produced an average of $60,000,000 per annum, or an aggregate of $1,000,000,000. And yet so unremunerative are mining operations as a whole, that it would be difficult to-day to find in this State one man for each $100,000,000 produced who has grown rich by working the mines. There is no subject upon which there exists such widely diffused error in the public mind as this; and perhaps there can be no more overwhelming refutation of the fallacy of these impressions than the simple statement of the fact, which is within the knowledge of every one having any personal acquaintance with the history of our mining operations. In early days, when the bars and beds of our mountain streams glittered with gold, and our surface diggings offered rich rewards to individual labor, there were, doubtless, many who reaped golden harvests with but little labor and no capital. But these have long since been exhausted, and mining now can only be carried on successfully by a combination of labor and abundant capital. Indeed, mining here is not essentially different from what it has always proven the world over—a fascinating illusion, in which the exceptional instances of success seem alone to be remembered, and to supply the incentive which still lures on its votaries, regardless of the overwhelming preponderance of the disastrous experience of others. And yet, while it involves nine out of ten in heavy pecuniary loss, if not absolute ruin, its result and effect is to "enhance the product," and "add to the wealth of the whole country." The development, therefore, of this important element of national wealth should receive every encouragement at the hands of the Government, rather than be repressed by a system of taxation, which practically amounts to the taxing the privilege of a man's spending his own money for the public good. However, many of the evils under which this important interest has heretofore labored will doubtless be remedied by the mineral land law of last Congress. There still exists the high mint charges and the internal revenue tax of one-half of one per cent., which resulted from the various propositions to tax our mines. From the discussions in Congress, this tax seems to have originated in the idea that individuals were reaping private fortunes from the public domain, without any return. Apart from what I have already said upon this subject, you can judge yourself how much foundation there is for this belief. But what I more particularly desire to draw your attention to is, its unjust application to foreign mines as well as domestic, the effect being to repel the products of Mexico and British Columbia, and force them into other channels. This is the result of making assayers the commissioners for the collection of the tax, and compelling them to collect it upon all bullion which they assay. It seems to me that if this matter was properly represented to the Commissioner of the Internal Revenue, he would at once authorize assayers and refiners, upon proper evidence of the foreign origin of bullion being produced to them, to stamp it as such, instead of imposing upon it a tax which was clearly never intended. In reply, therefore, to the inquiry of the Secretary, "What financial facilities may tend to the development of the country and enhance products? "I should unhesitatingly reply, a complete abrogation of all taxes and restrictions upon mining enterprises, and a radical change in our whole system of mining laws.

If it be true that gold alone is the true measure of value, and that the metallic wealth of a country is the only safeguard to national and individual credit or solvency in periods of financial disturbance, it would seem to follow as a very simple principle of political economy that all legislation upon such a subject should be directed to the encouragement of its importation from abroad, and the retention in circulation of our own production, or as the representative of other mediums of exchange, and into which they are at all times convertible. Yet, strange as it may appear, all our legislation upon this important subject has a directly opposite tendency. By imposing high mint charges upon the recoinage of foreign currency, and exorbitant refining and revenue charges upon foreign and domestic bullion, it deters the one from seeking our markets, and compels our own to seek the cheaper markets of other nations, or, rather, where the smaller charges make its commercial value greater than its minting value at home. While this subject has been engaging the attention of the first statesmen of Europe for the last three hundred years, and they have been constantly modifying their laws upon the subject, and adapting them to the changes in domestic and international commerce, it has been almost entirely neglected by our Government. About the only thing it has done since the discovery of gold in this State, and the magnitude and importance which the subject thereby acquired, was to pass the act of March 4, 1863, looking to the exclusion of refining from the mint, and making the retrograde movement of creating, in addition to other deductions, a coinage charge, by the acts of February 21 and March 3, 1853. The practical result of all this is very apparent. These

mint and revenue charges now amount to about 1¾ per cent. on gold deposits, and 2½ per cent. on silver. By collecting these charges directly from the owner of the bullion, as a deduction from its value, the minting or net coinage value per ounce of our bullion is reduced considerably below its commercial value, which is governed by the foreign markets, where no such tax or extortionate rate exists, and where minting expenses are defrayed from the public treasury, or by some special tax upon some article of general consumption, and not by a deduction from the value of the bullion. The theory is a perfectly just one. The making of money is a necessity of government, and a benefit to the entire community; and its expense should be borne by them equally, and not solely by the few who produced the material which enables the Government to supply its own prime necessities. There is no more justice in doing so than there would be to charge the manufacturer who, with his own capital and labor, produces the parchment or paper of which your currency is made with the cost of engraving, printing, and other expenses of converting it into money. It is immaterial to the Government how the expenses of its mints are defrayed, so it is done; yet it is very apparent that the particular mode by which it is done may lead to the most important results, for it cannot be denied that by raising the minting value of our bullion at home we not only retain a much larger portion of it in circulation, but we, at the same time, attract the products of foreign mints, for the same reason that ours now goes abroad. The policy, therefore, of trying to make our mints self-supporting at the expense of the mining interests only, has not only been a signal failure as a public measure, but is not sustained by the usages of any other nation, and is opposed to every just principle of political economy. The remedy is apparent and easy. The annual expenses of our mints are a mere bagatelle in the general disbursements of the Government, and it could well afford to throw them entirely upon the general treasury without its being felt. They are now principally owing to the fact that, while other Governments have long since restricted their mints to the more legitimate operations of coining money only, our Government still adheres to the expensive practice of also refining the gold and silver necessary for this purpose; and while these charges are very high and operate as a very oppressive tax upon the miner, they altogether fail to cover the cost. This is, however, in a great measure, owing to the fact that our mint officials have always exercised an authority in this particular matter that the law does not seem to sanction. It is very clear and mandatory upon the point, and says positively that the charge shall cover the cost, including material, labor, wastage, &c., and the authority which it subsequently gives to change these charges from time to time clearly means such changes only as are necessary to make those charges conform to the changes which from time to time may take place in the cost of material, labor, &c.

Acting on their own interpretation of the law, they have adopted a tariff of charges quite as remarkable as their construction of the law itself, and have made their charges in an inverse ratio to the cost. This not only makes it necessary for the Government to make large appropriations every year to cover the deficiency, but establishes an unjust tariff, to which private refiners must conform, while it is clearly the desire of the Government that they should be encouraged, so as to relieve it entirely of this expensive operation. I have no doubt that, upon examination, the appropriations which the Government makes annually to cover the deficiencies of the mints, growing out of their refining operations, will be found to exceed what it makes from its coinage charges; and, hence, could they get rid of the cost of refining, they could readily forego the small profit they make from coinage, and be better off for doing so, while they, at the same time, relieve the mining interests of the country from the oppressive tax. Again, by the mint's not making any difference between deposits of refined and unrefined bullion in the time of payment, the private refiner is not only compelled to conform to the unjust tariff of the mint, but bullion, after it is refined, is used by the Government to pay depositors whose gold is not refined for several days subsequent, and all because the law simply says that deposits shall be paid in the order in which they are made. To accomplish all that the Government desires, the private refiners only want common justice, and they will soon so far outstrip the Government in the advantages they will offer the miner as soon to relieve it entirely of the expensive process of refining by nitric acid (which alone can be used in the heart of the city,) while private refiners employ the more expeditious and economical process of sulphuric acid.

There are a number of ways in which the Government can aid and facilitate the consummation of this end if it so desires. The one which seems to me best adapted to this country, where the people are so deeply interested in the efficiency of the mint, and are so jealous of everything touching their peculiar interests, would be to have Congress give to the Secretary of the Treasury authority to contract with private refiners for an exchange of the crude bullion deposited at the mint for bullion fit for coinage or for gold coin, less such charges as might be agreed upon. This course has the advantage of relieving the Government of all risk on the one hand, while it secures to the miner the benefit of the Government assay and the Government responsibility. When this is once accomplished, the coining value of our bullion would at once become greater than its commercial value, and the result would be that the entire produce of our moneys would be coined at home, and here, at least, we would be relieved of those constantly recurring periods of stringency in the money matters, growing out of the demand for, and shipment abroad of, our bullion.

During your sojourn here you doubtless learnt enough of our peculiar system of exchange with the interior to understand that while the coinage of about $20,000,000 per annum seems to answer all of our wants as a circulating medium, yet nearly our entire product is made to answer the purpose of coin, being remitted from the interior in payment of merchandise sold by our merchants.

It is clear to my mind, that if the Government would repeal the coinage and internal revenue tax upon all bullion, and give such encouragement to private refiners as would secure to the owners of the bullion the benefits of their more moderate charges, the results which would accrue to the country in the reduction of the price of gold, and the consequent advance in our national securities, would more than compensate for loss of revenue now arising from those sources. In connection with this subject, it has occurred to me that if the Government does not deem it expedient to throw the expenses of its mints upon the general treasury, a tax might be imposed upon bills of exchange, drawn against shipments of specie or bullion, that would answer all the purposes of the coinage and revenue charges now made, and, at the same time, serve the further purpose of raising the coinage value of our bullion at home, as I have before observed, and likewise impose an additional obstacle in its shipment abroad; and all tending to the enablement of our Government to return to a specie basis at an early day. The difficulties of treating these important subjects within the limits of a hurried letter must at once become apparent to you, and I have therefore not attempted to do more than give you a general outline, with a few of the more important facts and considerations appertaining to the subject. If the suggestion which I have thrown out was adopted, and the mints were allowed to exchange crude bullion fit for coinage, they would at once be relieved of the expense and necessity of refining; but if it be deemed best to bring about that result by degrees, it would perhaps be best accomplished by giving such a preference to the bullion refined by private enterprise as would make it to the advantage of the depositor to patronize such establishments, and it would, in my opinion, be better to relieve such bullion of the coinage charge than it would be to limit the amount to be received by the mint, as now provided by law.

The Russian-American Acquisition.

The following is the substance of information in regard to Russian-America, derived from Professor Baird, of the Smithsonian Institute:

Means of Information.—Has had two explorers in that field between one and two years, who returned last autumn, bringing a collection of specimens of natural history, extending from the British possessions to the shores of the Polar sea.

Climate, Temperature.—The coast from Prince of Wales Island to the entrance of Behring's Straits during the winter months is about the same as at the city of Washington. Little snow, much rain. During summer months, very foggy.

Timber.—Whole country well up to the northern coast heavily timbered, chiefly hard pine forests; small trees up the very shores. Some of the islands heavily timbered with pine forests and dense underbrush; some of them destitute of timber, and covered with grass of luxuriant growth. The soil on the west coast produces excellent barley and roots, such as radishes, turnips, and esculents, such as lettuce, cabbage, &c.

Animals.—Furred animals, such as sea otter, river otter, sable, furred seal, mink, foxes, black, silver, red, &c., in great numbers. Red deer in the south, reindeer in the north.

Fish.—Herring, salmon, halibut and codfish abound in exhaustless numbers. Behring's sea and northward, great whales are very numerous.

Minerals.—Surface washings of gold have been discovered on the headwaters of streams, on the east side of the coast range of mountains. Geological developments the same on the west slopes. Native copper has been discovered in various places on the coast, and in the vicinity of Copper river. Iron ore of excellent quantity, now being smelted and worked by Russian artisans in repairing ships, &c. Coal is found in large quantities, used by the Russians for naval purposes, similar to New Brunswick coal, but not equal to Cumberland coal. Recent discoveries have been made of what is believed to be a better quality of coal, not yet tested.

Inhabitants.—Five or six thousand Russians, and fifty or sixty thousand Indians and Esquimaux. The Esquimaux inhabit the coast on the Northern sea; are industrious, peaceable, and tractable, and live by hunting and fishing. The Indians inhabit the interior, and live by hunting, fishing, and trapping.

Original Papers.

[PREPARED FOR THE JOURNAL OF MINING.]

A NEW CHEMICAL NOMENCLATURE.

By Samuel Dyer Tillman, A. M., Professor of Technology at the American Institute of the City of New York.

[No. V.—Continued from Page 64.]

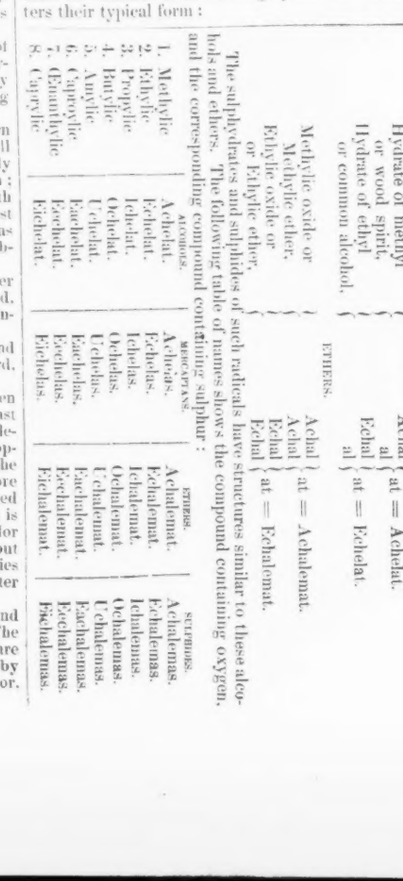
The monad radicals, forming the largest class of alcohols, and the corresponding monad radicals of the fatty-acid series, are, in the next table, placed side by side:

ALCOHOL-FORMING RADICALS.				
Methyl,	CH_3	=	CH^2H,	achal.
Ethyl,	C^2H^5	=	C_2H^4H,	echal.
Propyl,	C^3H^7	=	C^3H^6H,	ichal.
Butyl,	C^4H^9	=	C^4H^8H,	ochal.
Amyl,	C^5H^{11}	=	$C^5H^{10}H$,	uchal.
Caproyl,	C^6H^{13}	=	$C^6H^{12}H$,	eachal.
Œnanthyl,	C^7H^{15}	=	$C^7H^{14}H$	eechal.
Capryl,	C^8H^{17}	=	$C_8H^{16}H$,	eichal.
	Wanting.			
	"			
	"			
Lauryl.	$C_{12}H_{25}$	=	$C_{12}H_{24}H$.	yechal.
	Wanting.			
	"			
	"			
Cetyl.	$C_{16}H_{33}$	=	$C_{16}H_{32}H$,	yeachal.
	Wanting.			
	"			
	"			
Cetyl,	$C_{27}H_{55}$	=	$C_{27}H_{54}H$,	weechal.
Melissyl.	$C_{30}H_{61}H$	=	$C_{30}H_{60}H$,	weuchal.

ACID-FORMING RADICALS.		
Formyl,	COH.	artal.
Acetyl,	$COCH_3$,	artachal.
Propionyl,	COC^2H^5,	artechal.
Butyryl,	COC^3H^7,	artichal.
Valeryl,	COC^4H^9	artochal.
Caproylyl,	COC^5H_{11},	artuchal.
Œnanthoyl,	COC^6H_{13},	arteachal.
Caprylyl,	COC^7H^{15},	arteechal.
Pelargonyl,	COC^8H_{17},	arteichal.
Rutilyl,	COC^9H_{19}.	arteochal.
Enodityl,	$COC_{10}H_{21}$	arteuchal.
Laurilyl,	$COC_{11}H_{23}$,	artaxachal.
Coccinyl,	$COC_{12}H_{25}$,	artaxechal.
Meristyl,	$COC_{13}H_{27}$,	artaxichal.
Benyl·	$COC_{14}H_{29}$	artaxochal.
Palmityl,	$COC_{15}H_{31}$,	artaxuchal.
Margaryl,	$COC_{16}H_{33}$,	artaxeachal.
Stearyl,	$COC_{17}H_{35}$,	artaxeechal.
Balenyl,	$COC_{18}H_{37}$,	artaxeichal.
Arachidyl,	$COC_{19}H_{39}$.	artaxeochal.
Nardyl,	$COC_{20}H_{41}$.	artaxeuchal.
Ceroityl,	$COC_{26}H_{53}$.	artexeachal.
Melissilyl,	$COC_{29}H_{59}$.	artexeochal.

In the acid-forming series, the presence of *art'* makes the sum of the increments of *ach"* one less than in the corresponding alcohol-forming radical.

An alcohol formed on the dyad type, like water, contains one monad radical, and the corresponding ether two. Two examples of each will suffice to show the manner of illustrating by the new characters their typical form:


Hydrate of methyl or wood spirit, Hydrate of ethyl or common alcohol, } Echal } at = Achalat.
Methylic oxide or Methylic ether, Ethylic oxide or Ethylic ether, } Achal } at = Achalemat. Echal } at = Echalemat.
ALCOHOLS.
ETHERS.
The sulphydrates and sulphides of such radicals have structures similar to these alcohols and ethers. The following table of names shows the compound containing oxygen, and the corresponding compound containing sulphur:
1. Methylic Achalat. Achalemat.
2. Ethylic Echalat. Echalemat.
3. Propylic Ichalat. Ichalemat.
4. Butylic Ochalat. Ochalemat.
5. Amylic Uchalat. Uchalemat.
6. Caproylic Eachalat. Eachalemat.
7. Œnanthylic Eechalat. Eechalemat.
8. Caprylic Eichalat. Eichalemat.
ALCOHOLS. MERCAPTANS. ETHERS. SULPHIDES.

As a specimen of the new names of more than 500 compounds containing an alcohol-forming radical, a few combinations with the most important ethyl, *echal*, are presented:

Fluoride of ethyl,	echalf.	Chloride of ethyl,	echald.
Bromide of ethyl,	echalb.	Iodide of ethyl,	echalv.
Cyanide of ethyl,	echalarn.	Hydride of ethyl,	echel.
Acetate of ethyl,	C_2H_5-COCH$_3$-O$_2$,		echal-artachalt.
Monothylic oxalate,	C_2H_5-H-C_2O_2-O_2,		echelerot.
Diethylic oxalate,	$(C_2H_5)_2$-C_2O_2-O_2,		echalemerot.
Methyl ethylic ether,	CH$_3$ + C_2H_5-O,		achal-echalt.
Methyl-amylic ether,	CH$_3$ + C_5H_{11}O,		achal-uchalt.
Ethyl-butylic ether,	C_2H_5 + C_4H_9O,		echal-ochalt.
Ethyl-amylic ether,	C_2H_5 + C_5H_{11}O,		echal-uchalt.

Acid-forming radicals form anhydrides, corresponding in structure with simple ethers; and hydrates (acids) corresponding with alcohols. Examples of the names of acids of this class are here given: for the first term *al*. *l* is used to shorten the word.

Formic acid,	H-COH-O,	Lartalt = achet.
Acetic acid,	H-COCH$_3$-O,	Lartachalt = echet.
Propionic acid,	H-COC$_2$H$_5$-O,	Lartechalt = ichet.
Butyric acid,	H-COC$_3$H$_7$-O,	Lartichalt = ochet.
Valeric acid,	H-COC$_4$H$_9$-O,	Lartochalt = uchet.
Caproic acid,	H-COC$_5$H$_{11}$-O,	Lartuchalt = eachet.
Œnanthylic acid,	H-COC$_6$H$_{13}$-O,	Larteachalt = echet.
Caprylic acid,	H-COC$_7$H$_{15}$-O,	Larteechalt = eichet.
Pelargonic acid,	H-COC$_8$H$_{17}$-O,	Larteichalt = eochet.
Rutilic acid,	H-COC$_9$H$_{19}$-O,	Larteochalt = euchet.

[Other combinations containing an acid-forming radical, which have been or may yet be formed, are illustrated by the names of compounds containing *artachal* (acetyl.)

Chloride of acetyl,	artachald.	Bromide of acetyl,	artachalb.
Aldehyde,	artachel.	Acetic anhydride,	artachalemat.
Sulphydrate of acetyl,	lartachals.	Sulphyde of acetyl,	artachalemas.
Hydrate of chloracetyl,	lartachadat.	Hydrate of bromacetyl,	lartachababat.
Hydride of tribromacetyl,	artacibel.	Chloride of trichloracetyl,	artacod.

Twenty-two other radicals, similar to artachal, may form hundreds of compounds by uniting with electro-negative elements.

Acetones or Ketones, composed of an acid-forming radical and an alcohol-forming radical, have the constitution of the monad type. Of the fifteen bodies now known, seven are here cited:

Methyl-acetyl (Acetone),	CH$_3$.C$_2$H$_3$O,	achal-artachal.
Methyl-butyryl,	CH$_3$.C$_4$H$_7$O,	achal-artichal.
Methyl-valyl,	CH$_3$.C$_5$H$_9$O,	achal-artochal.
Ethyl-propionyl (Propione),	C_2H_5.C$_3$H$_5$O,	echal-artechal.
Ethyl-butyryl,	C_2H_5, C$_4$H$_7$O,	echal-artichal.
Propyl-butyryl (Butyrone),	C$_3$H$_7$.C$_4$H$_7$O,	ichal-artichal.
Butyl-valyl (Valerone),	C$_4$H$_9$, C$_5$H$_9$O,	ochal-artochal.

In the following hydrocarbon homologous series, formed by multiples of *ach* and known as the olefiant-gas series, one atom of carbon saturates but two atoms of hydrogen, the equivalence being thus expressed: *ar* = *el*. These bodies are dyads, each taking the place of two atoms of hydrogen in the water type.

Methylene (not yet isolated),	CH$_2$,	arlal.	Ethylene or Olefiant gas,	C$_2$H$_4$,	erlel.
Propylene,	C$_3$H$_6$,	irlil.	Butylene (Oil gas),	C$_4$H$_8$,	orlol.
Amylene,	C$_5$H$_{10}$,	urlul.	Caproylene,	C$_6$H$_{12}$,	earleal.
Œnanthylene,	C$_7$H$_{14}$,	eerleel.	Caprylene,	C$_8$H$_{16}$,	eirleil.
Elaene,	C$_9$H$_{18}$,	corleol.	Parainylene,	C$_{10}$H$_{20}$,	eurleul.

This series unite with dyads, and also with two atoms of a monad, of which the annexed are specimens:

Oxide of ethylene	or Glycolic ether,	erlelat or echat.
Oxide of propylene	or Propyl-glycolic ether,	irlilat or ichat.
Oxide of butylene	or Butyl-glycolic ether,	orlolat or ochat.
Oxide of amylene	or Amyl-glycolic ether,	urlulat or uchat.
Hydrate of ethylene	or Ethylic glycol,	erlelelt or echelt.
Hydrate of propylene	or Propylic glycol,	irlilelt or ichelt.
Hydrate of butylene	or Butylic glycol,	orlolelt or ochelt.
Hydrate of amylene	or Amylic glycol,	urlulelt or uchelt.

The hydrate of glyceryl, [C$_3$H$_5$-H$_3$]O$_3$ = *echarlilt*, is a triad alcohol. If *il*, the second term is replaced by three atoms of the monad *anet* = *ineat*, the interesting explosive compound Nitroglycerine is formed, the three terms of the type being [*ech*:*arl*-*ineat*]*it* = *echarlineot*. On the other hand if *il* in *echarlilt* be replaced by three atoms of the monad-acid radical COC$_{17}$H$_{25}$, *artarecchal*, the compound known as Tristearin is formed, containing C$_{57}$H$_{110}$O$_6$ = *u.xuchereat*. In like manner, only two or one atom of hydrogen may be replaced by two or one atom of the acid-radical.

Artificial fats have been formed by the action of acids on glycerin, *echarlilt*; and the following from among the glycerides are presented, with their new empirical names:

Monacetin,	C$_5$H$_{10}$O$_4$,	uchot.
Monobutyrin,	C$_7$H$_{14}$O$_4$,	eechot.
Monovalerin,	C$_8$H$_{16}$O$_4$,	eichot.
Monol. in,	C$_{21}$H$_{40}$O$_4$,	axeucharot.
Monopalmitin,	C$_{19}$H$_{38}$O$_4$,	axecchot.
Monostearin,	C$_{21}$H$_{42}$O$_4$,	exachot.

That modification of sugar known as glucose or starch sugar, C$_6$H$_{12}$O$_6$, has lately been regarded by some chemists as a hexatomic or hexad alcohol. According to this view its new name is *earlealt*. There are about thirty varieties of sugars and gums of nearly the same composition, to which new names should not be given until there is a general agreement among chemists as to their composition and constitution.

(TO BE CONTINUED.)

Translated for the AMERICAN JOURNAL OF MINING, by ADELBERG AND RAYMOND, Mining Engineers.

A Comprehensive View of the History and Present Standpoint of Geology:

Being the Introduction to Prof. BERNHARD COTTA'S new work, "Die Geologie der Gegenwart."

No. I.

All branches of Natural Science began with the observation of facts, and the suggestion of hypotheses to explain and connect them. In the course of progress systems were developed, which were held for a long time in too high an estimation, until at last the truth obtained recognition, that systems universally have no other value than this: to facilitate a comprehensive view of the mass of recognized facts.

Properly speaking, there is only one natural science, every branch of which is, in its growth, dependent on the development of the whole tree. Every step of progress in one department conditions, and is conditioned upon, progress in others.

The mission of Geology is the study of the earth's structure and its development. In no other field is the necessity of the co-operation of all branches of natural science more conspicuous than here; for the geologist has to study the globe in its most diverse relations: as planet of the solar system, as chemical and physical laboratory, as aggregate of mineral substances, as home of animals and plants, and as scene and result of an endless series of events.

Nobody would apply to the isolated geological ideas and observations of ancient times the name of geological science. When Empedocles located the cosmic fire of the Pythagoreans in the centre of the globe, when Megasthenes and Hecatacus recognized as fluviatile formations the deltas of the Ganges and the Nile, they were not therefore geologists; nor, when in the middle ages the celebrated Leonardo di Vinci referred the occurrence of fossils to the existence of former ocean-beds, was he on that account a geologist in our modern sense. The first traces of the development of geology as a science reach back into the seventeenth century. Nic. Steno, 1669; Rob. Hooke, 1688; John Ray, 1693; John Woodward, 1695; Giovanni Arduino, 1750; Stephan Guettard, 1755; Gottl. Lehmann, 1756; Christ. Fuechsel, 1761; Tobern Bergmann, 1769; Nic. Desmarest, 1771; Wilh. von Charpentier, 1778; and many others, are properly to be classed as geologists, since they carefully selected facts, and by study conceived ideas, which were afterwards more fully developed. But a truly scientific form was first imparted to geology, under the name of Geognosis, by Werner, who began, in 1780, the first connected series of lectures on the subject, at Freiburg. He not only classed the individual minerals systematically, in his own manner; but he also elaborated into a coherent system his theory of the formation of the earth.

According to his theory, the whole solid portion of the globe is due to aqueous deposition. All rocks are accordingly of essentially similar origin: they were, in a certain succession, one after another deposited from water, a process in which only one distinction was made, viz: between chemical precipitates and mechanical sediments. Periodical interruptions of this aqueous action and changes in the character of the sedimentary materials gave him occasion to distinguish so-called formations, each of which, however, Werner supposed to be in all localities petrographically uniform, in such a sense, that the different ages of rocks might be determined and recognized by their petrographical characters. Volcanoes were, to Werner, altogether the results of local ignition of combustible materials in the earth. Lavas were therefore to him an effect of the fusion of already existing rocks, while at present, on the other hand, they are considered as decidedly primitive rock formations, and volcanic action as (not a local effect, but) the result of the cosmic constitution of the globe.

The inequalities of the earth's surface were also, according to Werner's theory, almost exclusively the result of erosion by water.

These are the leading features of Werner's theory, the great simplicity and harmony of which, still further sustained by the personal influence of its author, secured for it a general recognition and circulation. Nothing seemed more simple than to understand it, and to study geology according to it. But this theory rested on a small number of incompletely recognized facts in an extremely limited field of geological examination; and it was without that comprehensive confirmation or correction from the other branches of natural science, which it is now so easy to obtain for any new hypothesis. Under these circumstances it is not surprising that, influential as Werner's strictly systematic theory has been in the history of geological progress, almost nothing of it has been found permanently tenable. A more accurate examination of even the really sedimentary rocks has led to conclusions essentially different from his. It would indeed be interesting to trace, step by step, the important changes that have been wrought in a science so young, but a detailed investigation of this kind would lead us too far away

from our object, which is the presentation of the present status of geology.

Place may here be given, however, to a few general remarks, concerning the transformation of geological doctrines, and emphasizing the leading features of progress in particular portions of the field.

It must be remarked in general, that, even in science, the fashions change, so that now one and now another class of investigations are predominantly cultivated. In geology the great questions of the day have been alternately of a physical, chemical, mineralogical, or organic nature.

All lasting progress has been slow and laborious, never sudden and spasmodic. Isolated remarkable discoveries and suddenly advanced ingenious hypotheses, have opened the way for progress, but they have never caused the sudden reformation of a whole science. It is in science, as in the development of the structure of the globe:—the slow and steady operations are by far more important than the sudden and ephemeral ones—the so-called catastrophes and convulsions, which have never had more than a local significance.

The beginnings of numerous important steps of progress in the realm of geology are so obscured by their early insignificance, that it is scarcely possible to name their precise originators. Even in those cases where an important discovery, or a new and fruitful idea may be ascribed to an individual investigator, he has often been only the first to connect already known facts with his individual ideas, or to formulate and clearly express the vague ideas already current. Something of this kind may even be said of that most influential change of direction which Sir Chas. Lyell gave to geology. It was already prepared, and von Hoff had even expressed the foundation thought in his "Geschichte der natuerlichen Erdoberflaeche" (1822 vol. I., pages 6, 209). This does not lessen the great credit due to Lyell, but it indicates the normal course of often originally insignificant, yet finally important currents of change. Very frequently we cannot trace the germ of progress to any name at all; and therefore we shall be most sparing in the mention of individuals as authors of reform. Even Werner was not the first who attempted to fix the idea of "formations"; he was preceded by Fuechsel.

Discoveries and sound theories cannot be made by force, nor by the mere power of will; they must pass through periods of preparation, and at the proper time they reveal themselves to the earnest student of things.

Already before Werner, and during his career, several rocks besides the true volcanic lavas were recognized, especially by Hutton and Voigt, as of volcanic origin—particularly the basalts; and a spirited war was waged between the Neptunists and Vulcanists, while Werner in Freiberg was still kindling into enthusiasm by his teachings pupils of every nation. The Vulcanists by no means denied the unmistakable effects of water, but recognized in addition the volcanic action as a very important agent in the history of the earth's development, while the Neptunists, on the contrary, held that all rocks were formed through the exclusive medium of water.

The question with the Vulcanists was the relative effect of volcanic and neptunic agencies. The Neptunists claimed everything—*i. e.*, they asserted the universality of neptunic agency, and the entirely secondary character of transformations by interior combustions.

The Vulcanists also disagreed among themselves as to the relatively greater or less operation of these agents—some of them classing certain rocks as volcanic which others held to be neptunic formations. These lines of demarcation suffered, in the course of time, manifold variations and were extended or contracted by party spirit beyond reasonable measure.

To follow all these alternations of theory is not our task; we have to do with the general course they took, and the final standpoint to which they have led.

TO BE CONTINUED.

The Engineer's Alphabet.

First obtain a fair familiarity with the mode of working out all ordinary arithmetical questions, and also a knowledge of algebra as far as simple equations. Learn also the elementary problems in mensuration, and how to measure heights and distances, and how to level and survey land. Next gain some general knowledge of the principles of chemistry and of geology, and of the qualities of stones and cements, the action of the tides, the force of the winds, and the amount of rainfall. Next obtain a thorough familiarity with the strength of materials, and acquire a distinct apprehension of the laws of virtual velocities and of the conservation of force. The law of virtual velocities enables the strain placed upon any part of a machine or structure to be immediately computed when we know the weight or force applied to any other part, and by this expedient, joined to a previous knowledge of the strength of materials, it can be easily determined whether any machine or structure is strong enough. Thus in a crane, if the interposed gearing is such that the travel of the handle through 100 in. will cause a tooth of a certain wheel to move through 1 in. then we know that the s train upon that tooth will be 100 times greater than the force applied to the handle, and so in all other proportions. So, also, in a beam or girder of iron of which the top flange is so incompressible, if we wish to determine the breaking strain acting upon the bottom flange when the beam is loaded in the middle, we have only to suppose that the beam has been broken, and if we find that the broken edges separate only one inch, while the weight falls through six inches, then the strain at the edge of the beam seeking to sever it is six times greater than the weight. The law of the conservation of force teaches that a force once existing cannot disappear except in the creation of some equivalent force, and one corollary of this law is that no form of mechanism can create power. Hence in a steam engine, if the steam were to be condensed by a jet of cold water immediately as it issued from the boiler, a certain volume of hot water would be produced. But if the same steam be allowed to flow through the engine, and be finally condensed in the condenser, the resulting volume of hot water will be less in proportion of the power exerted by the engine. Heat being a form of power, it follows that if a certain portion of it goes to generate mechanical power in the engine, there is less to expend in raising the temperature of the water by which the steam is condensed.—*Engineering.*

Tunneling Machines.

All tunnelling machines may be divided into two classes; the first comprising those which are provided with steel perforators, and the second those which are armed with a material harder than the rock through which they have to force their way. The former act by simple percussion, and the latter by grinding. Machines of the latter description must therefore necessarily be furnished with rows of diamonds; and a patent has been taken out at Paris by M. Lescho, for a machine so provided. Fortunately it is not necessary to employ diamonds of the first water, but an inferior kind imported from the Isle of Borneo will answer the purpose equally effectively. The perforating part of the machine consists of an iron tube terminated by a steel ring, in which is inserted a number of black diamonds. A combined motion of rotation or progression is imparted to the tube, causing the diamonds to bore into the rock in a manner similar to that in which an auger pierces a piece of wood. The iron tube receives the borings, which are detached by a blow of a hammer. This machine has been used with success in the perforation of the tunnel of Tarare upon the Bourbonnais Railway, and water power has been applied to work it with considerable advantage In the hardest rocks a velocity of three and a quarter feet can be obtained per hour.—*Am. Railway Times.*

The Bowels of the Earth.

It is a curious fact connected with deep mining, that between the hours of twelve at night and three in the morning, the disturbing influences in the bowels of the earth obtain increased activity. At that time it is observed by miners that water falls from places where none is observable during the day. The volume in the wheel is perceptibly increased, the atmosphere is charged with gases which often prevent the lights from burning, and small particles of earth and rocks are observed to fall from the tops of the drives. Whether this phenomena is to be attributed to the diurnal motions of the earth or other causes, it is worthy the attention of the curious.—*Pithole Record.*

Mining Summary.

GOLD AND SILVER.

California.

Nevada—The *Transcript*, March 28th, says: Some of the richest rock we have seen for many a day, has been struck in the incline of the Star Spangled Banner mine. The gold heretofore taken out has been mostly in sulphurets, but the specimens alluded to are thickly studded with free gold. The ore is of a dark blueish tint and very heavy. The gold seems to be distributed all through it.....Fifty tons of rock from the Liberty ledge, located at Eureka, have been worked in Booth & Co.'s arastra, at that place, and yielded $1,500. The Liberty is one of the claims located last Fall, it is four feet wide on an average, and at the rate of thirty dollars per ton will be a fortune to its owners .....The same paper, March 20th, gives the following relative to mining at Little York: The cement as well as the hydraulic claims are promising well. In cement, Curran & Buckman in their old claims are working about thirty-five men, and their mill and mine is kept in operation day and night. They are taking out, above expenses, from two to three hundred dollars per day. Their tunnel is in fifteen hundred feet from the surface, and they have a channel of cement which is from sixteen to eighteen feet deep. They are working this bank to the depth of about six feet and purpose working the balance by hydraulic method. This same firm are also engaged in prospecting the old Remmington cement claims. They expect to strike the channel after running three hundred feet. In these claims they employ six men, and they are kept at work day and night. In hydraulic mining the prospect is no less promising than in cement. Joseph Gardiner is running three sets of claims. He has made no thorough clean up yet, but from partial returns it is safe to predict an excellent yield. Curran & Buckman are also piping away at a ninety foot bank, and they have every indication that it will yield them a large amount of gold. Four miles above Little York, on the same divide, considerable profitable mining is being done. At Liberty Hill, Gardiner is opening five new hydraulic claims. These claims were worked years ago, but bad management, high prices for labor and heavy debts, "swamped" the owners, though the claims yielded handsomely. They can now be worked at an excellent profit. At Lower Hill, eight miles above Little York, two sets of hydraulic claims are being worked. These are owned by Skein & Co. and Frick Brothers. Both these companies are doing well. There are already more mines in operation than have been worked on this ridge for many years, and other companies are getting ready to start.....The *Gazette*, March 14th, says: At San Juan North, the famous Eureka claim, that in other days paid so enormously, is hardly paying expenses. The Golden Gate has not equaled expectations, although it is paying its stockholders a handsome dividend. The American claim at Manzanita Hill yields at each clean-up of from two to four weeks' run, from ten to seventeen thousand dollars.....The Grass Valley *National* of March 15 says: The owners of the Bowen and Morgan claims, on San Juan Hill, have commenced operations on a large scale. The prospects are flattering.....The Ophir and Allison Ranch claims have been stopped from work for several weeks, by the great quantity of water.....Meadow Lake correspondence of the *Transcript*, March 15th, gives these items: The California company have struck the Knickerbocker ledge at eighty feet. The lode is fully five feet in width. The Winton mill is now on rock from the Lightfoot claim—an extension of the Golden Eagle. I am confident that the issue will not be a success. The process used is, in my judgment, wholly inadequate. The milling works of the Mohawk and Montreal company will be in operation on the first of April. The ledge has been developed to the depth of two hundred and fifty feet, and shows excellent ore. The Gold Run Phœnix company, in the vicinity of the Mohawk, are working with energy in their tunnel. The ore is reported to be improving. The Golden Eagle company will start up again on Saturday. The Grant mill has resumed operations.....Prospects are flattering for a successful mining season in You Bet. The hydraulic miners, who were interrupted by the storm, are all at work now. Several cement mills are doing well.

Placer.—The *Herald*, March 28th, says: The Ambruster claim located on Georgia Hill, near Yankee Jim, was sold on Wednesday last to Dr. E. B. Harris for $10,000. It is located adjacent to other very valuable cement claims.....The crushing last week at the Harpending mine yielded five hundred ounces of amalgam.....Professor Silliman is now on a visit to this mine.....The Auburn *Stars and Stripes*, of March 20th, says: A strike, reminding us of "the good old days of '49," was made in the Buckeye claims, at Bird's Valley, near Michigan Bluff, on Tuesday the 12th inst. These claims are owned by M. McBride & Co., who sold them some time ago to Messrs. McClaffery & Ryan. These latter gentlemen bought mainly on a credit, and were possessed of but little capital besides energy and enterprise. To such an extent was this true that, though they pitched in with a

will and labored industriously, they were unable to maintain themselves and keep at work on the claim until it would yield returns, and hence were compelled to return it to Mr. McBride, of whom they purchased. But a few days after repossessing the claim, Mac, who is, and who richly deserves to be, lucky, came upon a couple of chunks of quartz and gold, one of which weighed sixteen and the other twenty-three pounds. The first has been crushed and yielded over $1,000, but the yield of the other is not known. These specimens came out of a bank which they were hydraulicing at a considerable distance above the bed-rock. At this same washing, in cleaning up the bottom which had been mainly stripped by the former holders, the lower strata, when the covering of loose dirt from the upper bank was removed, was found to be lavishly studded with the precious metal.....The *Herald* of March 16th says: On Tuesday last McBride, McCarty & Co., struck a rich quartz specimen in the old Buckeye claim at Bird's Valley, near Michigan Bluff. It weighed sixteen pounds, and when pounded up yielded eight pounds of gold. On the Saturday previous this claim had been abandoned in disgust, by two men who had worked in it all winter.....The owners of the Harpending mine are now repairing their mill, and getting things in trim for an early prosecution of work on the mine this spring. Crosby & Heck have recently completed several arastras for their mine. A flourishing town called Valley View has sprung up at this point.....Wm. Weisler, of Iowa Hill, recently sold his interest in the old Jameison claim for $8,000. .....The Dutch Flat *Enquirer* of March 6th says: Mining operations are everywhere in full blast. From Hawkins and Huyck & Co., whose claims are situated at the extreme southern point of the Gold Run district, all the way for three miles or more northward to Bear river, the pipes are playing .....Letters to same from Colfax says: The claim of Dillon & Co., to the west of Colfax, is still paying steadily eight and ten dollars to the man, and Walker & Co., just above, are doing as well. They have promise of water for some time yet. The quartz fever is yet unabated. Mike Curley has just succeeded in discovering a new lode, and is at present running a tunnel to tap the vein at a respectable depth.

Plumas.—Nelson Point correspondence of the *Times*, Feb. 22d, says: The miners at Sawpit Flat, Richmond Hill, and Washington Hill, are delving away. They can get water to wash up with but once a year; that is when the snow melts in the Spring. The gold is generally smooth and coarse. There is a company that purpose putting a bed-rock flume in Nelson creek. During the last month the claim at the Willow ranch, has had a three weeks' run. Dilk's, Reed's and Kane's claims, on Willow creek, are paying wages; and Emmons', on the same, but a bank claim is suspended for want of water. Richards' and White's, on Sawmill Point, have very encouraging prospects.

Eldorado.—The Placerville *Courier* March 16th says: Williamson, Chick & Co., who have been prospecting for a quartz ledge on the south side of Clay Hill for the past month or two, have struck a well-defined ledge at a depth of thirty feet, which pays $60 to the ton.....On Saturday last Mr. Shepherd showed us fourteen pounds of rock from his claim. It appeared to be half gold, and was but a fair sample of about one thousand dollars worth, which he took out in fifteen minutes that afternoon.....A test of some rock from the Arvidson lead shows $60 to the ton. .....Letters to same from Mud Spring says: The Pocahontas has an incline of 108 feet, with a three and a half feet ledge. The ten-stamp mill resumed work on Monday last. The rock pays ten dollars per ton on the average. The company are working fourteen hands. Mr. Kelsea, employing six or seven hands, is working a surface claim close by the mill, and is doing well. The miners, owing to a scarcity of water, during the dry season, employ their time in crushing surface quartz, which is found in abundance and pays well.....The *Democrat* of March 16th says: On Saturday last Mr. James Tullock sold his claim at Brownsville to G. W. Swan of this city, and parties in San Francisco, for $18,000 in gold coin. Mr. Tullock commenced work on this claim in July last. Upon testing it, he erected a small mill. Four hundred tons of rock crushed in this mill averaged $38. The ledge is three feet wide, and well defined....Mr. McManus, says the Placerville *Courier*, has shown us a very rich piece of rock from the claim of W. W. Stewart & Co., at Kelsey. The piece shown us is a fair sample of a large lot of rock taken out of the shaft at a depth of eighteen feet. The ledge is two and a quarter to three feet wide.....Judge Reid & Co. have taken up and are prospecting a mammoth quartz ledge, near Weberton, Diamond Springs township, about three miles from this place. They have sunk a shaft to the depth of thirty feet on the ledge, and are now running a tunnel to tap it. The tunnel will be about one hundred and eighty feet in length. The ledge is from ten to fifteen feet in width.....The Valdoro company, at Grizzly Flat, has a splendid forty-stamp steam mill in operation. The company have a shaft upon their claim 150 feet in depth, and at this depth the ledge is seven feet wide. The hoisting work connected with the shaft is complete in all respects, while the character of the rock taken from the shaft, has been too well tested to admit of any doubt of the complete success of the enterprise.....A letter from Georgetown says: The old Slagger claim, at Spanish dry diggings, near this town, is turning out some remarkably rich specimens. The claim is now owned by W. Roush, J. Wade, G. W. Sempers and G. W. Hunter, who are prospecting it thoroughly. The specimens taken out of it are dotted all over with gold, and the sulphurets are full of it. The old Taylor lode, near this place, is also turning out finely. Mr. Green, of San Francisco, bought it a few months ago, paid $3,000 for it, and would not now take ten times that sum for it. It is about four feet thick, and well defined. Gold is regularly diffused all through the whole ledge. Out of six pounds of unpicked quartz, taken at the depth of fifty-seven feet, Mr. Green got $11 69. The quartz was crushed in a common mortar, and is considered only as a fair sample of the whole.....The *Courier* says: Mr. Shepherd showed us the result of the first run made with the mill just erected on his lead on Poverty Hill. The amount of gold was a little over $200 from four tons of rock. This is a very good showing, but should not be taken as a fair test of what the mine is, as five pounds of quicksilver was lost from the pans during the run, which of course contained more or less gold.

Calaveras.—The San Andreas *Register*, of March 16th, has a letter from Chee Chee, which gives these items: New placer mines are being discovered, and many of them prospect well. Among the best is that owned by Judge Collins & Co., in Burke's Gulch. They have struck the old channel. It prospects entirely beyond all expectations. They have taken out some very large nuggets.....R. B. Warner's claim is paying exceedingly well.....H. Butterfield has opened a new claim on the Dead Man's Hill, which prospects well.....Hatch's claim still continues to pay well.....The claims on Warren's Ranch are turning out better than was anticipated.....A West Point correspondent of the *Chronicle*, March 14th, says: Henry & Lascey's mill is now in constant operation, crushing custom rock.....Some rich quarts leads have been recently discovered in the vicinity of Sandy Gulch.....Mr. Holmes's new mill, on the south fork of the Mokelumne river, is a splendid and substantial piece of work. It has at present ten stamps, with provisions for ten more. The motor is a Tyler wheel.....A letter to the *Times* from Copperopolis, March 8th, says: The famous Union mine is now worked at a depth of from five to six hundred feet. Night and day the work goes on, fresh hands relieving one another at intervals. Thousands of tons of rich ore are already out, more than can be transported to Stockton for many months to come.... The *Chronicle*, March 8th, says: E. Grant, who has been engaged for some time past in prospecting the bed of Rich Gulch, struck some very rich gravel last week. Eighty dollars was taken out by him from a space not exceeding six feet in length. Howell & Co., have been busily engaged working their claim. Hocy & Co., in the same district, have been doing remarkably well during the entire winter.....A letter from Copperopolis to the Stockton *Independent*, says: The Union, Keystone, and other companies are hard at work. We are told that the former company have now as much ore in their different drifts and tunnels as they will be able to find transportation for during the next three or four years. The engines, machinery, and in fact the whole pharaphernalia of this and the Keystone, adjoining, are of the best description and finished in fine style. The Caledonia, Empire, Inimitable, and other companies are also at work, though apparently with no very great success so far.

Los Angelos.—A letter to the *Alta* of March 18th, from Los Angelos, has the following: There is quite an excitement existing here concerning the new and extensive gold-bearing quartz leads recently discovered in the Sierra Nevada mountains (a continuation of the Sierra Nevada), thirty-two miles from this city, in a northerly direction. They are in a new district, known as the Gleason, adjoining the Soledad on the south. The Gleason ledge is immensely rich in free gold, and also abounds in sulphurets. The Hughes has just commenced sinking on the ledge. The claim is situated on both sides of the water-course, which has cut down the face of the steep mountain and exposed the ledge to a depth of three hundred and fifty feet, giving a splendid opportunity for working to a great depth on the vein. The ledge thus exposed is full of gold in every part. Two tons of rock, claimed to be a fair average, yielded $40 per ton.

Humboldt.—The Humboldt Bay *Journal* of February 21st, says: Operations on the Irwin Davis well, Bear River, under the superintendency of Mr. John V. Hunter, were resumed last week. The work on the Irwin Davis well, Mattole, has been suspended, and the machinery taken to Bear River. From the Union well, Mattole, we hear of good indications. At a depth of about two hundred feet a vein of oil has been struck.....A Klamath letter to same says: Mr. Hopkins, of Orleans, has sold his mining claim to Mr. Wm. Lord for the sum of $4,500.

Alpine.—The *Miner*, March 16th, says that the workmen in the Tarsish have struck solid hard quartz. .....The same paper, March 2d, says that the people of Alpine are waking up to the fact that their ores must be *smelted;* that after all, the combination which has been deplored as the cause of their refractory character, is a most *fortunate* one, and adds: The time will soon come when, instead of being a cause of discouragement, these "refractory" ores will be sought after in preference to others equally rich in gold and silver; when a lode containing this class of ore will be preferred to one wanting in sulphurets, both because of the greater persistency in depth, the stability of the sulphuret lode, and because the copper contained in such lodes can be made to pay all expenses, leaving the precious metals as net profit..... The same paper notices a brick about three inches long by one and three-quarters wide and an inch thick, the product of the first working of Leviathan by the Alpine mill, and adds: An assay of the bullion shows the result per ton of ore to be—gold, $95 60; silver, $35; copper, $15. The ore worked was not selected. This has been a thorough test of the Freiberg amalgamation, and also of the pan process, of working this ore, and, though the result is good, it is found, as in the case of the Morning Star ore, that there is too much metal in it to work profitably by any other process than smelting.

Butte.—The Chico *Courant* of March 1st is informed by Mr. Shellhous that the mines about Cherokee are paying the best they have for several years, owing to the unusual quantity of water. One claim alone has taken out over $20,000 since the first rains. The mines appear to be inexhaustible, claims having been worked for over ten years, and found each year richer and richer. Claims have been worked seventy and eighty feet deep, without striking bed-rock. Preparations are now being made to tunnel the mountain, the base of which has been discovered to be quartz gravel, and appears to be an ancient river bed.

Montana.

The Virginia City *Post*, summing up a review of the prospects of Montana for 1867, says: From every portion of the territory comes reports of paying mines, and a scarcity of men to work them. Helena has completed the ditch necessary to work the gulches and bars in the vicinity. Highland, Alder, Silver Bow, and fifty other placers, have a sufficiency of water for all purposes. Not less than ten thousand quartz lodes are recorded in the territory, of which those developed have yielded as high as $100 per ton in gold, and $320 per ton in silver by actual working test. On these depends the permanent wealth of the territory, and of their richness and facility for working, no one has a doubt. There is every reason to believe that the yield of the placers this year will exceed that of any previous one, and we may reasonably anticipate an excess over that of California, which for the last thirteen years has been decreasing. The Comstock lode of Nevada, is to-day acknowledged the richest mine in the world, yet forty mills in Montana yielding as the Turnley mill has on Union Whitlatch rock, would produce more bullion than did the entire State of Nevada, last year, and eighteen silver smelting furnaces similar to that of the St. Louis & Montana mining company, at Argenta, have the capacity and the material to accomplish the same result. Nevada has 179 mills, Montana has thirty, of which, at least, one-half are useless clap-trap affairs, that are only fit for crushing the hopes of the owners, which they have done pretty effectually. The day for patent humbugs has passed away. Stamp mills are in nearly every instance, being substituted, and one of the best indications of future success, is, that the practical, energetic men who have lived here, and understand what is required to achieve success, are the men who are procuring good mills to locate on well defined leads, instead of a blossom rock.....A Missouri correspondent, writing under date of March 13, says: Considerable excitement has been created here during the winter by the report of good and extensive mines having been discovered in the northern section of this county, on or near the headquarters of Thompson's river, and the indications are that there is truth in the report. There are said to be about one hundred miners encamped on the Jocko, waiting for the snow to go off, so they can get in to these mines. Many of them have been encamped there since last fall. Jack Fisher, the discover of Kootenai, is among them, and most of them are old Kootenai miners.....A Summit correspondent, under date March 19, writes: The following are a number of lodes that will be thoroughly tested by crushing the ore this coming season: Caverone, Keokuk, Polar Star, Yankee Blade, Mesley, Steel, Farragut, and the Keystone. They all have shafts on them, varying from thirty feet to ninety feet in depth. The Keystone has a shaft down sixty feet, and ore has been crushed from it and paid forty dollars per ton. It is one of our best lodes, and you must not be surprised to hear of big runs from it this season. The Excelsior company resumed operations on the John How lode to-day, by starting a tunnel. It will be six and a half feet high by six feet wide, and about four hundred feet in length; it will tap the lode about three hundred feet below the surface. A few days ago Messrs. Duncan & Countryman purchased eight hundred feet on the Nelson lode. The shaft is now at a depth of seventy feet. Parties will commence on it this week. Mr. Countryman proposes to have a California fifteen stamp mill running on the lode by next fall. I. T. Connor is on his way back from the States with a fifteen-stamp mill. Passing on up Bachelor gulch we come to the Hawkeye mill, that has been making those big returns that appear in

the *Post* every week. The mill is running as usual. And now we start up the mountain, climbing higher and higher until faint and weary, we arrive at the top of the justly celebrated Oro Cache mountain; and here, while taking breath, you can, at the same time, have a grand and picturesque view of the Madison valley and surrounding scenery, which well repays one for the exercise just taken. The Christnought company, as it is called here, is the wealthiest company in this section. They are at present sinking and drifting on claim number two, and also on the Discovery; the hands are working at a depth of eighty feet in Discovery and fifty feet in No. 2. The ore is very rich, paying at present $100 per ton. But this is a very low figure for Oro Cache rock, and Mr. Christnought informs me it will be several days before it will come up to its usual standard, from the fact that the mill is new and not more than one-half completed. It is the most extensive as well as the most costly mill in the country. The entire cost, when completed, will not be less than $150,000. The lowest figure, so I am informed, that Oro Cache ore has run is $90 per ton, and from that to $216 per ton. So you may look out for big runs. The company are also driving a tunnel for the Grant ledge, and several other lodes that are in the immediate vicinity. The tunnel is six by six feet, and one hundred and sixty feet in length. Through the kindness of Mr. Frank Steel, one of the discoverers of the Kearsarge lode, I am enabled to furnish your readers with the several runs made by the Hawkeye mill, from the time of starting to the present time:

January 7th—117 tons	$1,104 27
January 20th to 26th—42 tons	741 87
January 27th to Feb. 3d—108 tons	2,039 40
February 7th to 17th—144 tons	4,000 50
February 17th to March 3—162 tons	6,525 60
March 3d to 10th—108 tons	6,520 25
March 10th to 17th—90 tons	2,085 25
Total	$23,016 64

The ore was not assorted, but wall rock and all refuse matter was hauled to the mill and crushed together. These returns places the Kearsage high up in the list of first-class lodes, and Messrs. Steel and Shroyer may justly be proud at discovering such a valuable piece of property. Last week there was crushed at the Hawkeye mill twenty-eight hundred pounds of ore from the Black lode that cleaned up $24. The lode is situated in Brown's gulch. The parties owning the ledge intend hauling more rock and giving it another test, as soon as the roads become passable. Even if they do not test it again, I am satisfied the ore would pay well to work. One thing is rendered certain by these partial exhibits—that the wealth of the mines has not yet been fairly tested in those localities where operations have been carried on since their discovery; while another thing is equally apparent from continued new discoveries, that the entire mountains throughout this section of country contain the precious metals in great abundance; indeed, the supply promises, from the experiments made, to be inexhaustible, while the extent of country over which it is distributed gives room and opportunity sufficient for any number of capitalists who may choose to invest their capital, with the assurance of safe and speedy returns .....An Atlantic City correspondent, March 17th, says: "There is a party of men prospecting in the vicinity of Eagle gulch, and from last reports were confident of a strike; but it requires much labor in prospecting, as the bed-rock is wet and a drain ditch is necessary, which they are now at work upon..... Late intelligence from Highland runs thus: Our quartz prospectors have not been idle since the weather moderated. Yesterday Messrs. Myers & Longley discovered a fine ledge that prospects largely and bids fair to eclipse anything heretofore discovered in this section. George Searl, Esq., is making the necessary arrangements to develop the Reward ledge—generally conceded to be one of the best in the district. Rutter and others are sinking a shaft on the Mount Cenis ledge, a new discovery that prospects well in gold, silver and copper. The owners of the Golconda ledge have their tunnel in one hundred and thirty-two feet, one hundred and twelve feet of which has been hard rock, all requiring blasting. They expect to reach the ledge in running eight feet further. This work has been completed so far by four men, but they are of the right kind of stuff and do not seem to realize the meaning of the word fail. May their brightest anticipations be more than realized, is the sincere wish of every denizen of Highland..... Blacksoot is at last beginning to get over the effects of the severe winter, and miners who have been wintering in Deer Lodge, Helena, and other pleasant places, are returning daily and beginning to make preparations for work. There has been a little work going on all winter in three claims, and some prospecting done on quartz leads. As soon as the weather will permit work will be commenced in earnest, and the bar below town will be swarming with men. They expect to take out more money this season than last. The only drawback apprehended is a scarcity of laboring men, as all who were not owners of pretty good ground have gone to the Salmon mines. Extensive preparations are being made to work the rich gulches west of this: Washington, Lincoln, Jefferson, McClellan, California and Nevada, and companies are putting up hydraulic works on many bars in the foot hills.

Nevda.

The Comstock.—The San Francisco *Mercantile Gazette*, March 29, gives the following review of the stock market: The Mining share market presents a rather more cheerful view than at the close of last week, but the transactions at the Board have been rather lighter than usual. Nearly all first class shares are well sustained, and not offered with much freedom. The aggregate yield of the Comstock lode for the current month proves to be larger than was anticipated. Developments continue to be flattering, and at no former period during the past six months have a number of claims given such tangible evidences of value. Hale & Norcross has been to some extent withdrawn from the market, and is now rarely offered except at very full figures. We are indebted to the courtesy of the secretary for the following interesting statements, derived from the annual reports of the officers of that company, submitted to the stockholders on the 27th inst.: During the year ending March 20th, 29,401 tons of ore have been extracted from the mine, of which 28,635 tons were worked at custom mills, the aggregate value of which was $73 95 per ton, and yielding $1,354,220 40, an average of $47 32 per ton. The cost of its reduction amounted to $408,366,-44 an average of $14 26 per ton. The total receipts of the company for the past year, including cash on hand March 12th, 1866, have been $1,372,977 99, out of which $490,000 were returned to stockholders in dividends, equal to $1,225 per foot. This repaid the total assessments levied during the previous five years —$875 per foot—with the sum of $350 per foot additional, besides carrying over the large surplus in cash of $133,288 99, equal to a further sum of $333 25 per foot—making in all the handsome profit, in one year, of $1,558 22, or 155 per cent. on the par value of the stock. In a detailed statement of the entire disbursements, the dividends and cash on hand give 44.39 per cent. of the former; but in deducting extraordinary expenses, value of materials on hand, advances to Superintendent's account, real estate purchased, and other items, which are not properly chargeable to the mining expenses of last year, it is found that the actual profit has been about fifty per cent. of the entire product of the mine. The estimated cost of mining 29,401 tons of ore is $267,165 18, or $9 08 per ton. The Superintendent estimates the reserves of ore above the 780 foot level at 65,000 tons, which, if worth $40 per ton ($7 32 per ton less than the average of last year), will produce dividends to the amount of $2,207 25 per foot, as follows:

65,000 tons of ore, at $40 per ton	$2,600,000
Less cost of mining and working, $23 35	1,517,100
Profit	$1,082,900

The total assets of the company, including cash on hand, ore, personal property, real estate, hoisting works, etc., at the mine, suspended account, etc., amount to $237,353, less liabilities amounting to $3,315 .....Savage opened at $1.945, improved to $2,000, receded to $1,990@1,995, and closed yesterday at $2,000. During the week ending March 23d, 1,069 tons of ore were taken from the mine, the assay value of which amounted to $38,306, or an average of $35 83 per ton. We learn that the drift from the bottom of the south wing reached the 780 foot level of the Hale & Norcross company on the 22d inst., and that the ore on this line is about 12 feet wide, averaging $37 to the ton. This connection with the Hale & Norcross works was made at a depth of about 120 feet below the second station of the Curtis shaft ..... Crown Point has been quiet, selling at $860, advancing to $925, receding to $850@875, and at the close $900 was bid. The ore extracted during the week ending March 24th, amounted to 523 tons. We are informed that the east drift from the 500 foot level is in 94 feet, and the west drift 43 feet. No new developments have been made during the week under review .....Yellow Jacket fell from $880 to $810, improved to $740, declined to $820, and closed yesterday at $—. The meagre information received at the company's office in this city in regard ro the condition of this mine precludes the possibility of giving any facts to our readers .....Ophir has been pretty active under an improvement, advancing from $227 50 to $262, then selling at $250@257, and closing at $—. The west wall of this mine was finally pierced on the 23d inst., and the tenth level drift is now going through the ledge at the rate of from three to five feet per day. It is thought that the superintendent is very wisely working to the east side of the ledge before going south, in order to avoid the soft ground, which interfered with the direct course last year in the ninth drift south. They are running in clay at this date .....Chollar Potosi has been largely dealt in, nearly 600 shares changing hands within the past ten days, opening at $256, improving tto $259, receding to $252 50, rallying to $257 50, and closing at $000. During the week ending March 23d, this company was breasting to the east on the Santa Fe station. The ore is said to be 38 feet wide, and of a better quality than in the Blue Wing station above, and has been opened north and south about 40 feet. The "raise" over the winze in the north end, first station, new shaft, is looking better than at any previous period, and that in going south the ore is obtaining more width. The ore shipped to custom mills during the week ending March 23d amounted to 1,093..... Gould & Curry advanced from $490 to $507 50, receded to $490, and closed yesterday at $—. This company has been idle during more than half of the current month; it has been running uninterruptedly since the 22d. The shaft has attained a depth of 65 feet below the fifth station—970 feet from the croppings, and 770 feet from the D street shaft—in hard rock, and are making about one foot per day. The bullion returns to the 27th inst., amounted to about $40,00 .....A telegram dated San Francisco, April 22d, states that a riot occurred among the workmen of the Silver Bend mining company at Belmont, Nevada, on the 18th inst. The mob rode Mr. Canfield, the agent of the company, on a rail, and committed other outrages. A shooting affray also occurred during the riot, in which twenty men were killed. Mr. Canfield escaped unhurt..... The Virginia City *Trespass*, March 28th, says: A depth of 835 feet has been reached in the new shaft of the Empire and Imperial companies. Two days since the engine was stopped to permit the repair of some machinery, but it is running to-day and the work goes on. Water is becoming more abundant than desirable, but it is more than probable that the present machinery in use will prove sufficient to sink to a depth of 1,000 feet. If it does not, the castings, boilers, etc., necessary for the erection of new machinery, are on the ground and can be put up in a short time..... The Penaluma mill, in Gold Hill, under the foremanship of Levi Fink, a practical machinest and engineer, has, within the last twelve days, shipped seven hundred pounds of crude bullion. The mill is crushing rock from the Kentuck mine, and reduces about nine hundred tons per month, which averages $50 per ton..... The same paper, March 23d, says: The amount of bullion shipped from the office of Wells, Fargo & Co. in this city, during the past week, was valued at $254,660 11, and that from their office in Gold Hill at $210,095 11, making a total of $464,755 25—nearly half a million..... During the past week the following amounts of crude bullion were received for melting and assaying: By Theall & Co., Virginia, 7,588 ounces; E. Rueling & Co., Virginia, 22,942 ounces; Leopold Kub, Virginia, 2,430 ounces; George W. Dorwin, Virginia, 1,800 ounces; Edwards & Weigand, Gold Hill, 11,344 ounces; H. Harris, Gold Hill, 2,573 ounces; Van Wyck & Co., Gold Hill, 20,588 ounces.

Arizona.

The San Francisco *Guardian*, March 2, says: On the Rothschild copper vein, near the La Paz and Prescott road, five or six men are now at work..... New smelting furnaces for the Great Central company, are now on the way to Williams' Fork. In the Planet mine, Williams' Fork, very rich copper ore is abundantly found. Knowles & Coffin are perfecting their smelting furnaces.....In the Weaver diggings, parties have dug a ditch on Antelope Gulch, half way between Prescott and Wickenburg, seven or eight miles long, and are only waiting for the annual rains to furnish water to those miners who threw up dirt in that gulch. Many of them think they have dirt thrown up that in one week's work will make their fortunes. These parties had to pack upon mules their lumber over one hundred miles, through a country infested by Indians; and in digging their ditch, they had to go armed, not daring to leave their guns for a moment .....A letter from Prescott to the San Francisco *Times*, of March 9, says: Mining prospects continue good. The new placers, near Black Canon, pay half an ounce per day, it is said, and crowds have left $4 per day to get double farther off. The past two weeks quartz have also been discovered there. Unqua quartz lode, eight miles southeast of here, at 80 feet in depth, prospects better continually. Messrs. Noyes & Curtis own the mill there, now nearly done, and ready to run. Ticonderoga, at 90 feet, prospects better than ever. But placer mining is all that have been talked of for the past two weeks.....A Fort Yuma letter, dated Feb. 23, has these items: At Prescott there is much excitement over the discovery of new and rich placers on a tributary of the Agua Frio, near the Black Canon, some sixty miles from Prescott. Many parties had already started for the diggings .....The quartz mills around Prescott have varied fortune. The Borger mill is said to be idle. The Woolsey mill, upon the Ticonderoga, reports excellent returns. The Noyes mill, not yet completed. The Vulture mill, successful.

Oregon.

The Portland *Oregonian*, March 16th, contains the following: The miners at Canyon City and adjoining camps are busy at work opening their claims, with flattering prospects, for the coming season. The weather is decidedly beautiful. Farmers are making preparations for large crops of grain this season in the John Day valley. There are several parties making arrangements for a prospecting expedition in the Harney lake country, and also on the headwaters of Crooked river. The severe chastisement the Indians have received at the hands of the soldiers and scouts has inspired the adventurous miner with renewed courage, and will undoubtedly be the means of making developments in those sections that will be of vital importance.....Lieutenant Halloran, who came

down yesterday from the Dalles, informs us that there are already a good many men at the Dalles, fitting out for Crooked river. One party of seven men, with riding horses and four pack animals, started on Wednesday, and others will follow as soon as they can equip Lieutenant H. says there is considerable excitement about the Crooked river region, and all the old stories about gold found there by emigrants being revived and probably enlarged to suit the present state of mind .....The *Herald*, March 5th, says: We learn that the mines discovered last fall on the Kooternai are proving both rich and extensive. Quite a number of men remained there during the winter, many of whom made good wages during the odd times they were enabled to work. Both miners and traders express a confidence that the coming season will prove successful to all. Quite an influx of population is expected this spring.

British Columbia.

The Victoria *Colonist*, March 12, rejoices over the appropriation by the Legislative Council of $5,000 as a premium for the first quartz mill that may be erected in Columbia district, and adds: The principle might be extended to other districts with benefit. The true wealth of the country lies in its quartz leads. Alluvial diggings are all well enough in their way, but are generally soon worked out, and populations attracted by their richness are seldom permanent. Quartz mining, on the other hand, is of a lasting character, and imparts a permanency to every industrial interest. Develop one quartz lead, and prove that it will pay to work, and the country will bound forward upon a career of prosperity unexampled in its history..... Telegraphic dispatches dated New Westminster, March 4, state that at Carriboo a number of claims were working and paying over expenses, while some were paying good dividends. Among the latter was the Forward, which had struck a hill channel of red gravel. .....The Welsh is stopped by law suits with the Wake-up-Jake, Carriboo, Hit or Miss, and Borealis. .....Stock has risen in the Forest Rose and Rankin. .....Large expectations from Floyd and Alturas on Stout's Gulch next season .....United on Conklin's Gulch washed up 645 ounces the last six days it worked .....Home Stake and Hood were tunnelling for the same channel.....The ground of the Lone Star is to be prospected through the Hood Company's old tunnel .....The Britannia, further up, is taking out good pay. The whole of the gulch is located on both sides to the summit.....On Grouse Creek the Heron is paying as largely as ever, and other claims doing very well.....The Full Rig paid 112 ounces last week, and Discovery 139 ounces, for week ending 6 h .....If the claims prospecting on Canadian creek should strike it before spring, this section of the district will employ all the men in the country.....The Miller coy's shaft is down 50 feet and the whole creek is staked off ....Luke Ferguson, from Hixon creek, reports the Stewart company's quartz ledge from three to four feet thick .....A correspondent states: From McKay of Savannah's Ferry, I learn that mining on Scotch creek and Tranquille river will be carried on with vigor this year, and with every prospect of the most favorable results. The former has prospected well, and ten claims are recorded. The gold is coarse, resembling that of French creek, and is found by tunnelling into the bank. The creek empties into Adams' a branch of the Thompson. On Tranquille three or four companies are wintering and preparing to ground sluice, believing that they can make very good wages. .....Dispatches dated William's creek, March 1, run thus: Weather very cold and many claims have stopped working. Taylor company and another above Richfield are paying well. The Forest Rose is taking out good pay. Tunnels on Conklin Gulch are being pushed forward with good prospects. Discovery and Full Rig companies on Grouse creek are taking out big pay. The Sawmill there is nearly finished. On Lowhee creek several companies have taken up ground below the Vaughan and Sweeny claims, and expect to find a back channel. A prospecting party are going out to a place about eighty miles from William creek as soon as the snow will permit; rich diggings are expected. The snow lay about four feet deep on the creek. The Bed Rock drain is making good progress. Bald Head, Eagle and Sheepskin begin to work early in spring.

Canada.

TORONTO, April 20, 1867.

EDITORS JOURNAL OF MINING: Gentlemen—I enclose you some clippings from the papers, which will give you the latest news from the Madoc gold regions, and which, I think, may be relied upon. T. D. LEDYARD.

.....A gentleman just returned from the Madoc gold regions, reports the gold excitement on the increase. It is said that on Moore's lot, the 17th, in the 5th concession of Madoc, there has been found an excellent show of gold on the low grounds. Diggers are successfully at work on the Dingham lot, about a mile and a half east of Madoc village. Gold dust was found last week in several newly discovered placer diggings. The best specimens yet found were from the extreme north of Tudor or the southern portion of Limerick, in the Smith mine, worked by Powell, the discoverer of the Richardson mine. The Richardson, by the way, will not be opened for a short time yet. At Eldorado, one-fifth acre lots, sold at $150, have changed hands at from $500 to $1,000. A greater number of people went to the mining region last week than at any previous time .....The Belleville *Intelligencer* says: The rush to the gold regions still continues. Every day during this week the stages from Belleville to Madoc have been crowded with passengers, and many, unable to obtain stage accommodation, strap their packs to their backs and tramp it through. On Wednesday not less than one hundred strangers arrived in Madoc village, a large number of whom started at once for Eldorado, which is now the principal point of attraction. Our correspondent, in another column, speaks pretty positively of gold having been found in the creek and soil in the vicinity of the Richardson mine; and from what we have learned from different persons—whose statements we consider reliable—there seems scarcely any doubt that gold has been found in the soil at Eldorado and Cooke's place, and found in quantities which promise exceedingly well. Major R. M. Norman, of Millbridge, in Tudor, has forwarded us a fine piece of gold, in quartz, and also a specimen of the rock from which it was taken. It comes from lot No. 10, in the 7th concession of Tudor. We are also informed by the proprietor, Mr. John Kehoe, that gold has been found in lot No. 1, in the 3d concession of Elziver, within eighteen inches of the surface. Very little has been doing for some time past in the mines which have been opened, in consequence of the large quantity of surface water flowing into them. It will probably be two or three weeks before blasting will be resumed. We understand that the Hon Tuilla Flint intends commencing operations in the mines in the vicinity of Bridgewater within a week or two .....The same paper remarks: That gold has been found in what is called "placer diggings," has been pretty well established. M. Michel found particles of gold in the alluvial, and the public has been anxiously waiting for the opening up of spring, so that the creeks and mashes in the vicinity of the quartz ledges could be examined. Rumors of finding gold in the earth at Eldorado, and in creeks and marshes in different parts of the gold-bearing region, have been current for some time, but, with one or two exceptions, we have not been able to get these reports verified. Mr. Geo. Neilson informed us last week that gold had been found in a creek, on the farm of Mr. John Cook, Madoc. In company with Mr. Cook, Mr. Neilson took some dirt out of the creek, and, after washing it, found several particles of gold. Several parties had previously got gold from the same creek, and on Monday of last week, a gentleman of great experience in Carriboo examined the creek, and from one or two pans of dirt produced a good show of gold; his opinion was that the "indications" there were exceedingly promising.

Mexico.

The San Francisco *Bulletin* of March 11th has a letter from Lower California, giving these items: There are but two mills in the country that are prepared to work. One, the Pacheco, is a small one of only four stamps and two furnaces for roasting ore. This mill has been running about two years, most of the time on purchased ores. It is located about a mile above San Antonio, on the bank of the San Antonio Creek. It sends from $2,000 to $4,000 in bullion to San Francisco by each steamer. The other is that of the Triunfo Silver Mining and Commercial company, located at Triunfo, a small town about five miles west of San Antonio. The company have just completed their new mill and started to crushing on the 28th of January. The new mill works finely. It has run now nearly three weeks, and I am told that they have crushed and roasted about 100 tons per week, but as their barrels were not fully completed, they have amalgamated but a small portion of what was crushed. Their ore has averaged about $70 per ton.

COPPER.

Michigan.

The Ontonagon *Miner*, April 5, contains the following: At Nonesuch the party engaged in sinking to the 10 fathom level, commenced on the 22d of January, and completed their contract on Monday last. The vein continues sound in character and width to the bottom. At a meeting of stockholders on Wednesday, P. M., a committee consisting of Messrs. L. M. Dickens, W. W. Spalding, and F. W. Anchony, was appointed to continue explorations and make the necessary inquiries respecting the early organization of a company.....At the Mass mine the shaft on the Champion lode and connecting with the adit cross-cut level was holed last week. This will enable them to resume drifting east and west, which, judging from past experience, is equivalent to a steady, and for that class of openings, abundant production of mineral. The results from this lode wherever mined, and especially in the first work on the Mass, should induce the Co. to commence two more shafts east on the course of the lode ...At the Calumet a new mill is to be supplied with rollers instead of stamps. Those who control the interests of the company have no doubt weighed the entire subject of treating such copper rock, and satisfied themselves that rollers are better than stamps, and we hope their decision may prove correct.....The reputation of the Pennsylvania mine—Delaware vein—for mass copper is being well sustained. One mass with perhaps 20 tons exposed is found north of No. 2 shaft at the XL fathom level. Another was since encountered drifting north on the same level, the size of which is unknown.....The Houghton *Gazette*, same date, gives the following: At Kearsarge an improvement in the appearance of the conglomerate is reported this week .....At Eagle river a mass weighing about a ton and a half is reported, but locality not given. The vein is said to be improving.....At Cliff, No. 1 shaft is reported to have been damaged by the falling away of the skip last week, the drum on the winding shaft having broken .....At Schoolcraft the conglomerate has been broken into and found rich in metallic and oxide of copper. The belt is reported to be full six feet wide ...The Calumet company are talking of, and will probably only make, a tug channel into Torch Lake this season. The dredges were expected to commence work to-day.....At Isle Royale the pattern of the driving wheel for the pulverizer arrived here by express, on Monday. A new wheel will be cast at the foundry to-day, and we hope to announce in our next issue that the machine is running again. At Hecla on Saturday last, a large number of men employed at this mine were discharged, as the roads being broken up, there was no chance to remove the rock, and consequently no necessity of breaking so much. Regular mine work will probably be commenced now .....Relative to St. Clair, a gentleman from Eagle river this week, informs us that the stope in the back of the second level north of No. 2 shaft is looking splendidly, and yielding finely of rich stamps and heavy barrel copper. The stamp mill, though a diminutive, patch-work affair, produces about two tons of copper per head, each month. There are only four heads driven by water power, and striking thirty blows a minute ...The affairs of the Calumet are reported to be in a mixed and almost inextricable condition, but Messrs. Agassiz and Davis are laboring hard to straighten them out. The late general superintendent is cited as the cause. Some men, mostly rock haulers, were discharged this month, and we hear there was no small amount of grumbling at the issue of ninety-day drafts, when it was known that on the May pay day it is the intention to resume currency or sight payment. One man who declined taking ninety-day drafts, was offered and accepted pay in Mineral Range Road bonds, believing that he could get them cashed at the bank. He was surprised when he heard that it only kept them for sale. The Calumet product will not be returned till all the rock at the mills is cleaned up, as the roads are so bad no more can be hauled in. It is authoritatively stated that the product will be a little less than the last reported one.

IRON.

Pennsylvania.

The black band iron ore of the upper Red Ash measures, exists from a point near Tuscarora to Fremont in the deep middle basins of the first coal field. It is believed that it will be found nearly 1,000 feet above the position originally assigned, and from 1200 to 1500 above the Mammoth. The Pottsville *Miner's Journal* maintains that 24 feet of iron ore exists in the anthracite coal measures. The black band in the M'Ginnes shaft varies considerably in thickness, being sometimes seven feet in thickness, and occasionally but a few inches; obeying the laws of compensation, when extraordinarily thick at one place it is diminished in another, but will average from thirty inches to three feet. This vein has now been opened on the surface above water level, and its characteristics determined, confirming the true position and appearance of the ore. The position of this ore is above the vast formation of heavy sand-stones and conglomerates mixed with occasional slates and shales, that exist to a point near L. Over this bed a comparatively thin bed of sandstone or conglomerate exists, sometimes consisting of fine crystals cemented with iron and sand. But the succeeding measures consist of vast beds of slate, shales and indurated clays, which, in turn, is capped by a heavy sandstone, accompanied by conglomerate. It is supposed that this bed of ore is more carbonaceous in the eastern, and more calcarious in the western end. In addition to the M'Ginness a new black band has been discovered at Locustdale, in the Mahoning region, and a band almost identical has been found near Middleport .....The Pottsville *Standard*, April 20, says: The amount of black-band iron ore shipped over the Mill Creek Railroad for the week ending April 6, 1867, was 46 15 tons; previously, 2,781 17 tons; total, 3,828 12 tons. This ore was all from the McGinnes shaft at Mill creek, where mining is successfully continued.....Mining at the McGinnes shaft at Mill creek still continues, although the operations of the workmen have been somewhat interfered with by the sudden flooding of the mine. This was probably caused by the recent heavy rains having swelled the mountain springs more than usual, though some persons think the water came from the old shaft. The new slope of D. & J. McGinnes, on the eastern end of the same tract, is still successfully worked, but we have had no account of the number of tons of ore taken out.....We learn that

Messrs. Kurtz & Llewellyn have opened the outcrop of a vein of ore, supposed to be black-band, on the Ravensdale & Lewis tract, northeast of St. Clair..... Matthew Gibson, of Mt. Carbon, who has been searching for minerals in that vicinity for some time past, is said to have taken from an excavation in Second Mountain, below Pottsville, some fine specimens of copper quartz.....Notwithstanding the discouraging depression of all kinds of business generally, several parties are making arrangements to commence shafting for black-band and other ores immediately, the present fine weather being favorable for such operations.

COAL.

Pennsylvania.

BEECH HAVEN, Luzerne County, Pa., April 20, 1867.

EDITORS JOURNAL OF MINING:

Gentlemen: I had hoped to send my correspondence much earlier, but dangers and delays of navigation intervened, and I have only a "Flyer" now to offer—viz.: 173 tons for the week ending with this date; same period, 1866, 5,514 tons. The Wyoming Valley Canal is 64 miles long (Wilkesbarre to Northwestern), connects, north with the late North Branch, and south with the West Branch, &c. 56 miles is fed from Nautick Dam, 4 miles slack-water navigation, the remaining 4 miles is chiefly dependent on the North Branch Canal from the Lackawanna. From the 25th March we have had water from Nautick, and navigated for 60 miles, but our neighbors connecting have not. Now all the lines south of us are open, and since last week our tributary feeders at South Wilkesbarre and and Mill Creek have furnished a short supply for the 4 miles to Wilkesbarre, and it may be some weeks yet before our Northern Canal & Railroad company will give us a working supply—from that point—while our shipping points, Nautick and Plymouth, have been holding off for the spring floods before making their connection on the slack-water for the season. At the present writing there is nothing promising in the trade that I can see, and it is blank ahead for a month or two, and everything moves with uncertainty.

W. J. B.

The Pottsville *Standard* gives the following, relative to the coal mines and coal area of Pennsylvania: The Schuylkill coal basin is supposed to contain thirteen distinct seams of coal. At one time it was thought to embrace a hundred or more, but this originated in mistaking the different out-crops, where they only described saddles, for so many veins. The combustible qualities of the coal are divided into three classes, determined by the color of their ashes—the lower veins producing white, the middle gray or pink, and the upper red ashes. The first is prepared for smelting and puddling iron; the second for heating furnaces in houses, and the third for grates and cooking. But besides the marked difference in these three varieties in the economy of combustion, there is also a local difference in the character of the coal from the same veins; there is, in fact, all the difference in the qualities of coal that we find in different kinds of wood. Besides the distinguishing color of the ash, the coal graduates from a soft, semi-bituminous at the Susquehanna, to a free burner at the Swatara—a fine, compact and hard coal at the Schuylkill, to an exceeding dense variety on the Lehigh (and this is the strongest anthracite coal ever found on the face of the globe). North of the Schuylkill are the basins of the Mahanoy and Shamokin; while east of them are several small detached ones, as the Hazleton, Beaver Meadow, Buck Mountain, etc., all of whose coal (except the two former) is shipped over the Lehigh Canal and the Valley railroad. The coal of the Mahanoy is drawn over the Broad mountain by means of steam inclined planes, and reaches the Atlantic markets via the Schuylkill; that of Shamokin descends the Susquehanna river, or goes north via the Sunbury and Elmira railway. North of all these basins lies that of Wyoming—beautiful alike for its unsurpassed scenery, its romantic settlement and history, and to the geologist for the regularity of its coal measures. Like the Schuylkill basin, it is about five miles in width, by nearly seventy in length. Lackawanna creek drains the eastern portion, and meets the Susquehanna river in the centre of the basin. Entering the valley from the north, the river abruptly changes its course towards the west, and then glides down the middle of it some ten miles below Wilkesbarre, where it again deviates from the canal, and passes through the Nanticoke mountains. The coal of the Lackawanna has several outlets; the railway of the Pennsylvania Coal Company, the Delaware and Hudson canal, and the Delaware, Lackawanna and Western railroad, just completed, are the avenues of the Atlantic markets, while the North Branch coal supplies the interior country north and west of Scranton. A cross section of the Wyomining basin, in the vicinity of Wilkesbarre, exhibits five or six distinct but gentle axes, the southern one being comparatively level, and the coal lying near the surface. The whole basin appears to be remarkably free from disturbances of any kind. In the vicinity of the Nanticoke, where the measures begin to rise towards their western termination, the veins of coal occur in great purity and extraordinary thickness; and the excavations of the Grand Tunnel and those of the Baltimore Company, near Wilkesbarre, are nothing short of a phenomenon. A stage-coach, a locomotive and train might be driven through the excavated avenues of these mines. The principal vein at Nanticoke is thirty-five feet thick, Wilkesbarre twenty-eight, Pittson fourteen, and Scranton ten feet. The veins, it thus appears, thin out towards their eastern termini, and most likely come closer together. The Baltimore mines have been worked for many years, and it is worth a journey across the Atlantic to see them. The great vein was at first operated in open quarry, but the top covering having increased in thickness with the slope of the strata, it was found more economical to pursue the coal under ground, as in the case of the Lehigh mines. The measures having been thus cut down perpendicularly, six or seven openings were made into the coal, and up to the present moment we are informed more than twenty-five acres have been excavated. Probably not more than two-thirds of the coal, however, has been removed, as it was necessary to leave large masses of it remaining to support the overlying rock and soil. The light admitted by these openings reveals several acres of the interior, and there appears before you a stupendous forest of rounded pillars of coal. The scene thus presented is one of those things which neither pen nor pencil can betray; it must be seen. The roof is some twenty-five feet above the floor, and it is not only perfectly smooth, but often has the glossy polish peculiar to the laminated slates. The mine is free from water, and the air pure and invigorating. The cost of cutting the coal is as NEAR nothing as a combination of favorable circumstances could approach, while there is apparently enough of it to supply the civilized world for ages to come. Indeed, a casual inspection of this monster vein, which also exists in the Schuylkill and some of the other basins, will dispel all apprehensions as to the exhaustibility of our anthracite coal fields. But large as these fields are, they are but the mere outlayers of the still more stupendous coal formations of the Apalachian chain of mountains. This vast bituminous region, including the basins east and west of the Missouri river, contains at least twice the aggregate amount of workable coal of all the rest of the known world combined; and, lying as it does, mainly within the valley and tributaries of the Mississippi, its commercial value is entirely beyond the scope of arithmetical computation. The whole country from the Gulf of Mexico to that of the St. Lawrence and New Foundland, originally comprised one grand coal field. Detached portions of it are scattered along the Rio Grande and Chihuahua rivers in Mexico, as well as upon some of their branches in Texas; numerous isolated beds occur on the Red and Arkansas river; while further north lies that of Missouri, separated from the Illinois only by Mississippi and Missouri rivers. The southeastern point is pierced by the Ohio, and it approaches within some fifty miles of the Allegheny coal, which, lying in a position nearly north and south, runs parallel with the Atlantic plain for a distance of seven hundred and fifty miles. On the eastern slope of the mountains are the isolated beds of North Carolina, Virginia, Maryland, and a portion of the semi-bituminous, bituminous and the great anthracite basins of Pennsylvania. It originally traversed portions of New York, and the New England States, where small deposits and traces of impure coal are found; but the invasion of the sea, in its northern course, has overflowed the beds, leaving those of the British provinces literally to emerge from the water which surrounds them. Pennsylvania, of itself, has a greater area of coal than all England, Scotland, Ireland, Wales, Spain, France, and Belgium united. Pennsylvania has a surface of not quite 14,000 or nearly one-third of its whole area. Large as this body of coal land seems, some of the other States exceed it, though none of them have anything like the number of distinct coal veins or aggregate thickness of coal. It is estimated that we have in all the States of the Union upwards of 150,000 square miles of coal; but Pennsylvania is the only State which affords all the different varieties, as red, grey, and white ash anthracite, and semi-bituminous, bituminous and cannel coal. Our anthracite fields are the greatest depositaries of that description of fossil fuel on the globe, and as they are nowhere surpassed in quality, quantity or accessibility of the coal, they must ultimately be looked to for the supplies of a large portion of the civilized world.

The Pottsville *Standard*, April 20th, says: We learn that yesterday morning a fire suddenly broke out in the colliery of Audenreld & Potts, at Wolf creek, above Minersville. The flames burst forth with great fury, driving the men from their work in haste, and at last accounts it had not been extinguished. The mine was on fire some months ago, but the fire was supposed to be extinguished.....On Tuesday, 17th inst., a fall of coal in the Salem Tunnel, West West, released a quantity of gas, which took fire from an open lamp of a miner, and an explosion occurred, killing James Hopkins, and badly burning Thomas Lewis and Richard Edwards. The place took fire, and it was found necessary to drown it out.....On the night of the 12th inst, about 9 o'clock, an explosion of fire-damp in Bancroft's Slope, at Ashland, killed eleven men and injured another. There is no blame attached to any one in charge of the works. The cause of the explosion is a mystery. The only surviving man remains insensible, and unable to give any account of the accident. Four other men were employed in the slope, but they were absent at the time of the explosion. John Eltringham, Superintendent Pioneer Colliery, states in a letter that the cause of the explosion was "purely the work of wicked recklessness of some person who madly disobeyed the rules of the works."....The Honesdale *Republic*, April 11th, says: The Union Coal Company expect to commence loading boats at this place about the 1st of June. A new engine at the head of the plane is well under way, the deep rock cut in the same locality is nearly down, and the carpenters are at work on the high works on the dock. When this work is completed it will add materially to the business of our town. The Pennsylvania Coal Company will run fifteen boats on the Delaware and Hudson canal this summer. This is the same number they ran last year. .....The Hazleton *Sentinel*, April 18th, says: Messrs. John S. Serrill & Co., at Mt. Hall (Lumber Yard,) have their new breaker completed, except a little work about the shutes, and will commence shipping coal in a few days. They are driving the gangways, and the coal continues to improve in quality.....We take the following from the Shamokin *Herald*: The strike which commenced at several of the collieries last week became general on Monday, every operation in the region standing idle. The miners demand an advance of from 15 to 30 per cent., and the operators refuse to give it, as there has been no advance in the price of prepared sizes. At some of the collieries the men asked for no advance, but remained out at the notice of the striking party.

Nova Scotia, etc.

The Chief Commissioner of Mines reports that there has been a falling off in the total quantity of coal raised in the last year. A large interest is still taken in coal mining. Within the year, 376 applications have been made for licenses to search, embracing about 1880 square miles. Of this area, 84 applications, covering about 420 square miles, have been for ground never previously applied for. Again, the number of licenses to work taken out during the year comprises 73 square miles, a larger extent than has ever been applied for within any previous year. This fact indicates an increased degree of confidence in the Nova Scotian coal deposits from those who have been most engaged in exploring them. He accounts for the decrease of the coal product thus: "As to the decrease in our coal product for the past year, the cause of that must be patent to every one. The abrogation of the so-called "Reciprocity Treaty" with the United States, and the imposition, in the latter country, of a somewhat heavy duty on coal, has, of course, had its damaging effect upon our coal trade, as the United States was our largest consumer. Still, the effect has not been so great as might have been expected; and the aspect of affairs at the close of the first fiscal year after the abrogation of the treaty, is the very reverse of discouraging. On reference to tables in the appendix, dropping fractions, it will be seen that the total sale of coal during the year amounted to 601,302 tons, or 51,552 tons less than those of the last previous year. Yet the shipments to the United States show a decrease of 145,744 tons. This falling off, it may reasonably be presumed, is not due wholly to the abrogation of the treaty. The great demand for coal during the late war, and the depressing effects of that war upon productive industry in the United States, gave a great stimulus to our coal trade, and one which did not cease with the close of the war. Again, when the abrogation of the treaty was imminent, a further stimulus was afforded to that trade, efforts being made to force as much coal as possible into the United States market before a duty should be imposed upon it." The exports to the neighboring colonies increased by 56,099 tons. The principal coal regions are the counties of Cumberland and Pictou, and the Island of Cape Breton. In Cumberland county there are seven collieries, viz.: Joggins, Victoria, Lawrence, Macan, Chugnecto, St. George, and the New York and Acadia. Operations in the Lawrence have ceased, and no returns for the New York and Acadia are given, but in the other five, in the year ending September 30, 1866, 18,862 tons were raised—134 men and boys having been employed on the work. In Pictou county there are many valuable collieries, the most extensive of which is that belonging to the General Mining Association, known as the Albion. Here the seams are of extraordinary thickness, the average thickness of the "main" seam being 38 feet. The "deep" seam is worked at Dalhousie pits, the average thickness being 15' 6". Extensions are being made. Proper attention is paid to the ventilation and drainage of this colliery. The expenditure is returned at $38,475 32. Adjoining the Albion and the Acadia mines, a peculiar oil coal is found, called "Stellar." The expenditure here has been, on the Carmichael area, $6,879, and on the Frazer $56,046 43. The Nova Scotia adjoins the Carmichael area, and is leased by T. French. Progress is being made, and $4,275 expended on adits and levels, houses, &c. On the same seam as that worked by the Acadia Company is the Bear Creek, opened last year by Mr. John Campbell. The expenses in machinery, &c., was $601. On the German, $4,054 54 were expended. On the area owned by the Montreal and

Picton Company, coal is mined which is said to belong to the main seam of the Albion. In the Albion mine 222,437 tons were raised, 716 men and boys being employed. In the Acadia the product was 14,662 tons, 244 men and boys working. In the Bear Creek 533 tons were mined by 15 boys and men..... Port Hood was opened last year, and on the works $19,480 have been expended. In New Campbelltown, in Victoria county, three seams are mined. Here the coal measures rest against a large mass of syenite. The bord and putler principle has been adopted in working these seams; $15,574 expended on improvements. At the well-known Sydney mines, the principal operations were carried on in the main and the Lloyd's Cove seams. The working on the main seam is the most extensive in the province. The expenditure was $28,358; the quantity of coal raised was 182,915 tons—number of men employed, 549. In the Lingan mines, the working extends over 45 acres. The coal is brought in wagons containing two tons over a railway to the shipping wharf, which is distant two miles. The depth of water at the place of shipment has been lately increased. Expenses of adits, levels, &c., $13,020. Tons of coal raised 59,780; men employed 205. In the International 13,364 tons were raised. Expenses of improvement $5,621. The quantity of coal raised at Blockhouse was 107,642 tons; 376 men and boys employed. At Glace Bay 61,902 tons, at Gowrie 35,704 tons, at Cow Bay 1,138 tons were raised. The total quantity raised in the ending Sept. 30, 1866, in Nova Scotia, was 684,740 tons; number of men and boys employed, 3,043. There is great hope of richer yields.

MISCELLANEOUS.

Missouri.

There is renewed activity in the Missouri lead fields, and discoveries have been made beyond Washington county and the southwestern districts. In that State the plumbiferous ore can be found wherever the second and third magnesian limestone (especially the latter) can be traced. In Christian county float mineral has been discovered. The deposit is about forty-five miles east of the Granby mine. Float mineral is the ore freed from the rock, as in the case of gold, &c., and deposited in clayey loam. It marks the locality of the open gash veins, or vertical crevices, deprived by decomposition and water of part of their rocky and metalliferous contents. From a small section of the Christian county diggings many hundred pounds of bar lead have been produced. The metal is very soft and maleable. In Franklin county, north of Washington county, "a cavern has been found nearly filled with lead," to use the newspaper language. This is evidently an opening or enlarged crevice in the vein, where the galena is found in thin sheets attached to one or both walls. In Benton county, in western-central Missouri, there appear to be hundreds of acres dotted with placers of float metal.

Maine.

A recent letter from Bangor, Me., says: "A subject which is just now receiving the attention and exciting the feelings of our Piscataquis neighbors is the discovery of rich mines of silver, copper and lead near Foxcroft. Five lodes have thus far been discovered, running in lines parallel with each other, and all of them have been opened to the length of about fifty feet, and some twenty-five feet in depth. The thickness of the veins increases as they deepen, and no diminution in the valuable character of the ore is yet detected in any direction. Several assays have been made, all showing rich results. The ore is found to contain from $230 to $350 worth of silver to the ton. The purer part is found to contain as high as seventy-five per cent. of lead, the principal part of the ore being argentiferous galena. Other parts of the same lode produce from twenty-five to thirty-three per cent. of copper in connection with galena. Slight indications of gold have also been detected, but as yet in the very smallest amounts. Indications of similar veins of ore are said to have been observed for miles around, but as yet these stories need confirmation. The facts above detailed respecting the Foxcroft mine are from a reliable source, and specimens of the ore are now on my table before me."

Minnesota.

A letter dated Superior, L. S., April 3d, to the St. Paul *Press* runs as follows: A tax of seven thousand seven hundred dollars was levied, principally for road purposes, a portion to be devoted to the road to Wah-be-gaw, opposite to Fon du Lac, for the benefit of the slate companies engaged developing their quarries in St. Louis county, Minn. The Lake Superior slate company is composed of citizens of Wabashaw, Minn., who have constructed the necessary buildings for their employees. This company will no doubt ship a large quantity of slate when the road is finished. The St. Louis River slate company is composed of citizens of Superior, who have a force at work opening their quarry, erecting buildings, etc.....The Black Hoof gold fields are now rivalling those of Vermilion Lake, with the advantage of being about thirty miles from Superior, and near the military road.....Considerable amounts of lumber have been hauled from Superior recently for the use of the miners. It is to regretted that the Caleb silver lead vein, in Lake county, remains unopened. We believe it would pay a good dividend were it in the hands of an enterprising company.

Nevada.

The Virginia city *Trespass*, mentioning the renewal of operations on the Beneheimer, Empire and other copper claims at Peavine, says: In Nevada our attention has been too exclusively directed to the discovery and reduction of silver ore, leaving the baser metals to be mined at some future day. With the construction of the Pacific railroad across the mountains, an epoch in the history of mining has commenced that will eventuate in the shipment of other than silver and gold bars. The copper of Peavine and Walker river; the argentiferous galena of Washoe and Truckee; the tin of Nye; the graphite of Ormsby and Lyon, and the varied ores of Humboldt, will be worked and pour into the markets of the Pacific and Atlantic a full tide of metaliferous treasure, which will ebb again and bear in the recoil merchandise for the sturdy miner, to make his home in the sagebrush more comfortable.

Pennsylvania.

The Oil City *Republican* says: A new well was struck on Saturday last on the Atlantic and Great Western Petroleum Company's property on Church Run. It is within a few rods of the Eureka well, and is now barreling out over fifty barrels of oil per day. The Atlantic and Great Western Petroleum Company are the sole owners. The Miller and Pithole Pipe Company are laying a line of pipe from Miller Farm to Cherry Run.

Prussia.

Some officiol tables have just appeared as to the mining and metallurgical production of Prussia in 1865. It appears that this production was as annexed:

	Tons.	Value.
Coal	18,591,150	£4,954,928
Lignite	5,021,446	710,440
Minerals of every kind		1,529,440
Pig	693,137	2,700,857
Steely Pig	47,087	232,152
Casting pig 1st fusion	31,680	264,353
Iron	404,295	4,004,017
Rough steel	29,864	429,543
Zinc	56,483	1,038,804
Lead and litharge	28,311	497,327
Copper	2,982	273,130
Salt	204,982	223,823

Slate Quarries and their Management.

It too often happens, says Joseph Kellow, in the London *Mining Journal*, that indiscriminate investments, when induced by specious promises of unusually large dividends, become, through reckless expenditure, totally exhausted before the desired object is secured. Unfortunately the slate quarry enterprise (in the past) has not escaped the improvident waste which indiscreet judgment and the inaptitude of untrained hands have indelibly engraved upon some fine properties in North Wales. Those of your readers who may have suffered from the inexperience of others in this growing branch of industry and fortune will, perhaps, the more eagerly digest the subject of this letter—namely, the proper method of using capital on slate quarry development, on which I offer the following suggestions:

1. Let it be understood that a great difference exists in the inclination of this class of deposit; consequently, a difference in the system of proving and developing will be necessary.

2. In proportion to the amount of difference met with (as a rule) will be the difference in the amount of capital required to bring the quarry into a paying state.

3. If the quarry property does not afford sufficient evidence (from natural indications) that it can be successfully opened, and marketable slate produced at a good profit, let a sum be fixed upon for proving the quality and dimensions of the seam.

4. Let no expense be incurred upon the exterior, beyond what is necessary to facilitate the work of proving, which, in most cases, will be small.

5. Let the work be prosecuted under efficient superintendence, in order that each yard of rock may have the benefit of experienced inspection.

6. As soon as sufficient knowledge has been gathered from the several stages of progress that the deposit is of sufficient value to encourage arrangement for laying open the rock for slate-making, let care be taken in advance to provide against certain contingencies, which may now and then arise from an extensive laying out of the several workings.

7. Guard against a removal of top (waste) until such time as circumstances render its removal necessary.

8. Never attempt a Penrhyn or Llanberis scale of opening and clearing before the magnitude and facilities combine to sanction its adoption.

9. After the information bearing upon the real merits of the quarry has been demonstrated, let the clearing and debris at the several points be removed, preparatory to the immediate opening of the vein or veins, thus avoiding unnecessary outlay, which often discourages capitalists, as, in too many cases, the working capital fund is extravagantly drawn upon years before the progress of the work demands it.

10. Let the superintendence be under the weekly or fortnightly supervision of a person practically qualified, not solely by the study of geology, but by the studious appropriation of natural rules, in unison with a fair proportion of acquired art, in turning to good account this majestical and marvellous incorporation of mineral compound.

11. Let the local or resident manager take his instructions from the superintending manager, who, being fully experienced in the art (having made himself master of his position from early boyhood), can adjust the most difficult inacuracy, and deal with the most intricate intrusion upon economic principles, while the working out of his instructions can be accomplished by a man who, though not prepared to encounter difficulties which are common in the best of slate quarries, can effectively complete, from his acquaintance with this class of labor, the work which, if superintended by the visiting manager, would entail a much greater cost in salary.

12. Skilled management can only be secured on the above system at a fair and reasonable salary, say from £75 to £100 per annum, exclusive of travelling expenses; in this way a half-dozen quarries could procure it at a trifling cost, the resident manager being appointed at about the above stipend.

13. From this system it will be seen that the submanager in a few years would be schooled at the expense of the visiting manager; therefore, it would not be fair to dispense with the services of the latter without making compensation for the advantages secured to the company for whom he has been acting.

14. As but few can be trusted with advantage to themselves or their employers when raised to authority, although it be but of second or third class, to prevent and discourage unworthy advances, it should be incumbent that the resident manager should obtain a certificate of fitness from his superior before taking the entire charge of a quarry.

In conclusion, I may add that I shall feel it a pleasure occasionally to supply information tending to ventilate this important subject, and indebted to your journal to give the same publicity.

Geographical Area and Population of British North America.

The following statistics of British North America, valuable for reference, are taken from the "Year Book and Almanac of British North America," lately published at Montreal:

	Square miles.
Upper Canada	121,260
Lower Canada	210,020
New Brunswick	27,105
Nova Scotia	18,660
Prince Edward's Island	2,100
Newfoundland	49,200
Total	419,345

If to this be added the area of Vancover's Island, 20,000 square miles; British Columbia, 200,000 square miles; and Labrador, the Hudson's Bay, and Northwest territories, with, say 2,750,000 square miles, we have a total for British North America of no less than 3,389,345 square miles. According to the last census, taken in 1861 for Canada, Nova Scotia, New Brunswick, and Prince Edward's Island, and in 1858 for Newfoundland, the population is as follows:

	Males.	Females.	Total.
Upper Canada	725,575	670,516	1,396,091
Lower Canada	567,864	543,702	1,111,566
New Brunswick	129,948	123,099	252,047
Nova Scotia	165,584	165,273	330,857
Prince Edward's Island	40,880	39,977	80,857
Newfoundland	55,118	58,170	124,288
Total	1,694,969	1,600,737	3,295,706

Since the previous census, the population had been increasing at the annual rate of:

In Upper Canada	4 34
Lower Canada	2 50
New Brunswick	2 60
Nova Scotia	1 82
Prince Edward's Island	2 07
Newfoundland	1 50

At the same ratio the population would have increased since the last census to

In Upper Canada	1,802,056
Lower Canada	1,288,880
New Brunswick	295,084
Nova Scotia	368,781
Prince Edward's Island	91,443
Newfoundland	130,000
Total	3,976,244

The shipping owned in British North America is as follows: Number of vessels, 7,943; tonnage, 1,029,764; value, $36,338,453; of which the greater portoni is owned by New Brunswick.

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NAVIGATION OF THE COLORADO.

Of the advantage of large and navigable rivers as means of internal communication there can be no question. Dispensing with the difficulty and labor of building expensive roads through regions where at the first settlement of a country labor and material can be procured only at exhorbitant rates, they afford very great facilities for locomotion. Long before the existence of those iron roads which now unite our great centres of commerce, we found in the Ohio, the Missouri, the Mississippi, and the other great rivers, means of distributing our population and gathering in the wealth of the fertile valleys which they drain. The benefits of these great natural canals are fully felt, and efforts are constantly made to reap as much advantage from them as possible. Lately considerable attention has been directed to the Colorado, and an expedition, under Messrs. Adams and Trueworthy, has recently explored it to demonstrate its capability for navigation and to ascertain how far it would assist in developing the resources of Arizona and the surrounding country. Hitherto the river was navigated to a distance of three hundred miles from its estuary in the Gulf of California, but Mr. Adams has sailed as far as Callville (Utah), more than three hundred miles higher up, and from his observations he believes that "the river can be made navigable, at little expense, to a point 680 miles from its mouth, in the 41st parallel of latitude, or where the line of the Union Pacific Railroad crosses the Green river, making the entire extent of navigation over 1,400 miles." It appears that some interested parties have represented the navigation of this river as beset with insuperable difficulties, but according to Mr. Adams, these do not exist—the water at all places being of sufficient depth, and never being so rapid as to impede progress. The opening of this river will be productive of very great advantage in developing the resources of Arizona and those parts of Nevada, California and Utah which are accessible from the Valley of the Colorado. The saving in freight alone will be very great. Goods can, it is said, be delivered at Callville from San Francisco or New York at a cost of four cents per pound, or twelve cents to Salt Lake City, a difference in favor of this new route of twenty cents in the pound. We believe that the navigation of the Colorado will confer lasting benefits on the wealthy region through which it flows.

ACCIDENTS IN MINES.

In a recent article on the fatal explosion in the Clover Hill Mines, we attributed that catastrophe to the inexcusable carelessness of the men whose duty it was to examine the mine to discover accumulations of gas, and we expressed an opinion that it was a serious error of judgment to entrust to a man seventy years of age, the onerous duty of seeing this done. In the report recently made by Mr. Cox, the former superintendent, it is shown that the accident was caused by the gas men neglecting to replace the door at upset No. 8—which could have been done in fifteen minutes—or to examine that part of the mine with the Davy safety lamp—which could have been done in five minutes. It is believed, also, that the chief gas man was too old to satisfactorily discharge his duties. There can be no question at all of this; but it appears to us very unfortunate that it is only now, after the loss of sixty-nine lives, that those in charge of the mine should be convinced of this truth.

If mining beneath the surface of the earth be a very profitable employment, it must also be admitted that, as at present conducted in most mines, it is fraught with considerable peril to life and limb. There are dangers arising from want of proper ventilation, permitting accumulations of carbonic acid gas injurious to the lungs, and of fire-damp, the great source of explosions; there are dangers from the use of naked lights, or from what is equivalent, safety-lamps with keys, or matches, and tobacco pipes; there are dangers from want of proper drainage, and of sufficiently powerful pumps. Many lives have been lost by blasting without using proper precautions—by imperfect tunnelling weakening the sides and roofs, and causing them to fall in. There are dangers from "creeps" and "crushes." Life and property have been destroyed by conflagrations, too often the result of neglect. There are dangers, too, from inexperienced management, and from unthinking, incompetent supervision. But most of these dangers may be almost absolutely removed if there be no carelessness on the part of the workmen, and if there be active, educated men placed in charge. Accidents may occur which no talent or no care can guard against; but we believe such cases will be found to be very few. In one of the last numbers of the London *Mining Journal*, we find an analysis of the immediate cause of explosions in England in 1865, by which one hundred and sixty-five lives were lost. According to that, one hundred and thirteen deaths, or seventy per cent., were caused by the use of naked lights, while but one death occurred, where a safety-lamp locked, and *said* to be in good order, was used. By lamps not locked two lives were lost; and by lamps locked, but attended with great laxity in discipline, explosions causing the loss of thirty-four lives were caused. These facts prove that where ordinary care is used, and proper attention paid to discipline, mining underneath the surface may be comparatively free from danger. Nevertheless, there are few occupations more dangerous than underground mining, especially in collieries, when those having charge of the operations are unskilled and untrained, or when the workmen are careless. No effort should be spared to secure competent supervision, and a careful fulfillment of all orders given, with a view to the prevention of accidents. No laxity is permitted in regard to regulations for the profitable working of the ore, and equal care ought to be taken for the preservation of human life. All mechanical appliances which are useful in rendering mines safe ought to be used; and in collieries, besides the usual means of producing currents of air, such as waterfalls, &c., it would be well to use a fire-damp indicator.

INDIAN BARBARITIES—SUGGESTIONS FOR THEIR PREVENTION.

We are in receipt of telegrams announcing more Indian atrocities—perpetrated, too, on the very men who went armed to prevent such barbarities. We may well ask, if United States troops are not safe, what may the peaceful inhabitants of the Indian territory expect in the future. We think that the Executive have by this time sufficient to convince them that the mode of dealing with these barbarians is radically wrong, and that if they intend to prevent the Indians robbing and murdering, some different policy must be adopted. In a late number of the *Army and Navy Journal*, we find published a letter from an old campaigner in which he suggests an effectual way of settling the Indian question. His plan may not meet with the favor of those who have formed their ideas of the Indian from Fennimore Cooper's tales, but the occasion demands severe measures. He comments on the old mode of sending off large columns of troops in pursuit of Indians, and ridicules the idea of sending infantry over the vast prairies on the frontier, in pursuit of Indians, who are mounted on the best horses in America, as well as the fleetest. Speaking of the troops now employed in this warfare, he says:

"In the first place, nineteen-twentieths of the troops now on the frontier in pursuit of the Indians, and guarding exposed posts, are composed of men recently recruited in the Atlantic States, the officers newly appointed to positions, men who probably have never seen an Indian, or know any more about their mode of warfare and character than a Chinaman does of the mysteries of the Trinity, and, as a consequence, they are completely at the mercy of these red devils, to be killed and scalped ad libitum. Officers are placed in command of important and exposed points, whose only recommendations are that they have acted gallantly during the recent rebellion, and displayed good management in the field, etc., but this fact does not make them Indian fighters, or qualified for commands in an Indian country, where they have got to deal with a cunning and treacherous foe."

How true this is, the Fort Phil Kearney massacre will prove. That we may successfully cope with the savages, he proposes the following plan:

"Do away altogether with the Indian Bureau, and turn the management and control of Indian affairs over to the War Department. Break up Indian trading stations, and have no more Indian agents (the latter have caused all the troubles). At every agency, or proposed agency, station a detachment of infantry. Have all annuities and Indian goods invoiced to the officer in command, the same as Quartermaster and Commissary stores; and let the distribution and management of the goods, and the conducting of the agency be done under the immediate supervision of the officer in charge, holding him responsible for the faithful performance of his duties.

Establish stockades (temporarily) at prominent points (say one hundred miles) west of the Missouri River, at different points in and near the Black hills, and on the streams that flow through the Mauvais Terre. Garrison these stations with one hundred infantry, with four 12-pounder mountain howitzers, to act entirely on the defensive; and store at these points a year's supply of forage and provisions, say for twelve hundred cavalry (besides the stores for the garrison). Start out three or four columns of cavalry in pursuit of the Indians, from different points, the entire force acting under the instructions of an experienced officer (Brevet Maj. General Alfred Sully), to chase these up and not allow them any rest, or time to hunt and secure their Winter supply of buffalo meat. By one vigorous campaign of this kind the Indians would be forced to sue for mercy and peace on any terms, as starvation would certainly be the result, as they are compelled to lay up large quantities of buffalo meat for their families for Winter. It is utterly impossible to supply their wants, if they are forced to depend on the Winter hunt."

He believes that stringent measures such as these—necessary as severe—would be productive of immense good, and that one summer's campaign, as above proposed, would suffice to forever put an end to our Indian troubles, and would take the conceit out of those red devils, who have now become elated

with their recent success and exploits in massacreing a garrison of innocent and harmless Irish and Dutch recruits, lately from their homes, and the young men from the villages and towns of New England.

☞ From very great press on our space last week, we were obliged to hold over the letter of Mr. Garnett on the Mint laws. It will be found in another column.

Scientific Meetings.

AMERICAN INSTITUTE—POLYTECHNIC BRANCH.

SURVEY OF CENTRAL ASIA—THE EOZOÖN CANADENSE—IMPURITIES OF WATER IN WINTER—CITY RAILROADS—THE REVOLVING ELECTROPHORUS.

At the meeting of the Polytechnic on Thursday evening, the chairman, Prof. Tillman, read a short note on some of the recent surveys made in Siberia by the Russian topographical corps. The road by which the great caravans from the southern parts of Central Asia travel to Russia has been mapped out on a scale of 250 sagenes (1,756 feet) to the inch. The area surveyed in four years comprehends 300,000 square versts (131,887 square miles). The Professor also read an account of *Eozoön Canadense*, found in the Laurentian limestone. Under the microscope the minute structure of the Eozoön were detected, though less distinctly perceived than in some of the specimens mineralized by serpentine. In some chambers are small amorphous bodies, containing pointed siliceous spicules, seeming to be the remains of sponges that have established themselves in the cells after the disappearance of the animal matter of the eozoön.

The question of ventilating ice-bound fish ponds having been raised, Dr. Van der Weyde stated a curious fact relating to the effect of ice in preventing the absorption of air by water. The water supply of Philadelphia is taken from the Schuylkill, and some miles above the city there are several manufactories from which refuse matter is drained into the river. For some distance the water is quite dark, owing to the presence of organic substances, but as it approaches the city it becomes clearer—the oxygen of the air having been absorbed and the carbonic acid deposited in the form of mud. During last winter, when the river was frozen, no oxygen was of course absorbed, and the consequence was that there were numerous complaints of the impurity of the water.

Mr. Price exhibited an invention by which bodies falling in front of the wheels of railroad cars would be removed, thus preventing numerous accidents entailing loss of life. Some of the members expressed themselves favorably of the simplicity of this invention. It appears that the inventor explained to one of the Superintendents of one of the city railroads his invention, and being asked what was the price of attaching it to a car, mentioned fifty dollars. The Superintendent made the extraordinary reply, "We can kill men cheaper than that!"

Mr. Montgomery made a statement in reference to the use of corrugated iron for a proposed elevated railway through Broadway, from the Battery to the Central Park. He maintained that his design affords the greatest amount of strength with the least amount of material, at a small expenditure of money and labor. The pillars which serve as supports can be used as telegraph poles, lamp posts, &c.

Dr. Van der Weyde explained the principle and construction of Holz' new electrical machine or revolving electrophorus. Electricity is known under two forms—statical, or that produced by friction, and dynamical, or that which is the effect of chemical action, as galvanism, and which is known only as a current, while statical electricity may be accumulated. For some time, since the discovery of Galvani in 1780, statical electricity has been neglected, but of late important discoveries have been made, amongst which was this machine of Holz', which in appearance is not unlike an ordinary plate glass machine, but which does not produce electricity by friction, but by *induction*. Dr. Van der Weyde then, by means of the ordinary electrophorus, explained the principle of induction, showing the alternation in locality of positive and negative electricity in electrified bodies. He showed how this new machine, by means of induction, produces electricity. A sheet of paper placed within a short distance of the glass disc is charged with a small portion of the electric fluid, and the disc is made to revolve. Induction draws from the atmosphere the electricity which is collected by means of points placed at the back of the revolving disc. This machine is not intended to supersede the ordinary friction machine, although it may be worked much more easily. A conversation ensued, in which many of the members took part, asking various questions as to the principle of this new addition to electrical machines.

GERMAN POLYTECHNIC ASSOCIATION.

CONICAL SHELL PROJECTILES—BEAMS AND TRUSSWORK.

The German Polytechnic Association held its regular weekly meeting on Friday, April 19, 1867, the president, W. Hauff, being chairman. After discussing some questions and correspondence, Mr. Hauff read a paper on conical shell projectiles, which had been patented by Mr. A. Trauth. They are exploded by concussion, but there exists a material difference whether this explosion takes place at the commencement of the motion, when suddenly a great velocity is imparted to the projectile, or, at the end of the motion, when the ball strikes against an obstacle, and its motion is suddenly stopped. The detonation brime is enclosed in a small capsule, loosely fitted in the front part of the projectile, and an ingenious construction of this apparatus, containing the fuse, allows the shell to be exploded at either of the above-named times, by simply placing this capsule either with the fuse facing the front or the back of the projectile. In connection with this there is a second apparatus for regulating the time which elapses from the detonation of the brime to the explosion of the projectile. After a detailed description of this invention, Mr. Lacius spoke of the relative strength and weights of constructions for bearing heavy loads, either as solid beams, subjected to a breaking strain, or as trusswork, with tension and compression strains acting on them only. The advantage is always in favor of the latter, and the more so the simpler the trusses are—the maximum of resistance, for equal weight of construction being reached in the diagonal brace system. The power of resistance of solid beams can be defined from the cross section, it being in direct proportion with the moment of inertia of said cross section. The neutral axis, to which this moment relates passes through the centre of gravity for all materials having the same modulus of elasticity for compression and tension. Materials offering greater resistance to compression than to tension strains, like cast iron, must be loaded accordingly, in order that the modulus of elasticity corresponding with the compression strain may be equal to that corresponding with the tension strain. The neutral axis is then again in the centre of gravity of the cross section, and the beam is of equal stability. Mr. Hildebrand then spoke of the manner in which the Western steamboats are braced, and how the strains are transmitted from the weaker parts of the vessel to the stronger parts. It is generally very simple, and made with great understanding of the action of forces. For instance, the manner in which the weight of the wheel-houses and out-board bearings are supported by each other by means of a horizontal rod and inclined braces resting on the sides of the vessel.

Correspondence.

[To insure insertion of Correspondence in our columns the full name and address of the writer must be given.]

Liquid Fuel—Petroleum Can be Used at Little Cost, and with Effect, as Fuel for Boilers, &c.—Utility of Gas for Heating Locomotives.

HUMBOLDT, April 18, 1867.

EDITORS JOURNAL OF MINING:

GENTLEMEN—Judging from the tone of the articles that have appeared in the various scientific journals during the past few months, it would seem that it is not generally known to the scientific world, that liquid fuel is very extensively used by the refiners of Western Pennsylvania. At the Humboldt refinery, Plumer, Venango county, and at many others in the vicinity, no other fuel is used, either for distillation or steam purposes. The method of burning it does not materially differ from that described in your journal of April 13th. The fuel used is the waste material; either the naphtha above 65° or 68° Baume, or the residue, heavy oil. A pipe conducts the fuel from a supply-tank to the fire. A steam pipe across the furnace, just within the door, throws fine jets of steam along the burning liquid, forming a blast, that, with naphtha, will send the flame to the top of the smoke-stack, if desired. Last summer, a rather small-sized tubular steam boiler, at the Humboldt Refinery, was forced, for some 500 consecutive hours, to furnish all the steam used, the second boiler being out of repair. The injection pump was almost constantly in operation. The fuel used was light naphtha. No such amount of steam could have been supplied by coal.

Unfortunately for science, the fuel is in great excess, and at present unsaleable. Therefore, no attempt has been made to economize, or even to note the amount of fuel consumed in evaporating a given amount of water. The light naphtha cannot be safely got rid of, except by burning. Large quantities of residuum are daily run into the creeks, and could be had for little more than the handling—for with crude at from two to three dollars per barrel, delivered in the stills, it is poor economy to attempt to work the heavy oils.

It would be very easy, and would cost but a very few dollars, to arrange a locomotive to use these liquid fuels. I think it is somewhat surprising that the railroads running into the oil regions, as well as the steamboats navigating the Alleghany, to Oil City, still persist in burning coal, when, at so small a cost, they could be arranged to burn, at pleasure, either liquid or solid fuel. The only important change that would be necessary, on changing fuel, would be to push a drip pan on top of the grate bars when burning the liquid fuel, and pulling it out when they desired to burn coal or wood. In some part of the tender a tank could easily be arranged for the oil or naphtha. The boiler furnishes its own steam, which is, by no means necessarily superheated, but does very well without. These arrangements have been too long in general use, for any one, at this late day, to make them the subject of a patent.

Gas from the oil wells is another fuel almost as extensively used as the liquid fuels. Along Bull Run, a small tributary of Oil Creek, above Petroleum Centre, gas is almost the only fuel used in heating and lighting the houses, as well as in making steam. It is collected between the casing and tubing of the wells, and conducted in pipes wherever required. It is largely in excess, and can be seen night and day, burning from large waste pipes along the hill sides, adding greatly to the already very curious and picturesque scenery—so lighting up the horizon that, from a distance of three or four miles, it appears like a very brilliant Northern light. Gas is by no means equally abundant in all wells. Some wells that produce large quantities of gas, supply fuel to two or three others that are deficient. The contrivances that are resorted to to utilize this gas are not wanting in ingenuity, and are sometimes amusing. Anything at hand, with the help of a piece of pipe, is made to serve the purpose. I have seen it burning in a common cylinder anthracite stove, by simply taking out the rocking grate, and putting the end of the gas-pipe into the hole formerly occupied by the rocking bar. Had there not been a hole convenient, the contriver would have passed the

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pipe into the ash pit, and turned up the end. Nearly every man in the oil regions is more or less of a pipe-fitter, and claims that he can "run an engine" *per consequence.* AN ENGINEER.

MEETINGS.

Phillipsburg Coal & Iron Co., 195 Broadway, May 2, 1 P. M.; Delaware & Hudson Canal Co., No. 7, Nassau street, May 14, 12 M.; Gold Rock Mining Co., 93 Wall, May 7, 10 A. M.; Arcadian Copper Co., 48 Pine street, May 2, 12 M.; South Boise Tunnel & Mining Co., 111 Broadway, April 29; Mount Blanc Silver Mining Co., No. 2 Bowling Green, May 2; Consolidated Petroleum Oil Co., office of T. D. Sherwood, Esq., 111 Broadway, April 29; Pennsylvania Cannel Coal & Railroad Co., 42 Court street, Boston, April 27, 11 A. M.; Waverly Company, 134 State street, Boston, May 6, 12 M.; Lehigh Coal & Navigation Co., Board of Trade Rooms, Philadelphia, May 7, 10½ A. M.; Borden Oil Co., 524 Walnut street, Philadelphia, May 2, 8 P. M.; Maple Shade Oil Co., 524 Walnut street, Philadelphia, May 16, 12 M.

MARKET REVIEW.

FRIDAY EVENING.

Gold and Silver Stocks—At First Board Consolidated Gregory sold at $8.90; Columbian G. & S., $3.25; Corydon, $6 90@7.25, with the prospect of a further advance; Holman, 8.60 at 13c.; Nye, 5c.; Quartz Hill, $2.05; Smith & Parmelee, $4.65; Ohio & Colorado, b 3, 95c. At Second Board Alameda rose to $8.95; Atlantic & Pacific, 8 10, $1.50; Consolidated Gregory declined 5c.; Corydon touched $7.30, and People's G. & S., 65c.

	April 18.		April 26.	
	Offered.	Asked.	Offered.	Asked.
Alameda	....	8 85	8 95	9 00
American Flag	90	1 00	50	90
Atlantic and Pacific	....	2 35	1 50	1 60
Bates & Baxter Gold	1 50	2 25	....	1 75
Benton Gold	1 00	1 25	95	1 10
Bobtail Gold	....	3 00	2 00	2 50
Boscobel Silver	....	5 00	....	....
Bullion Consolidated	....	1 30	....	1 50
Burroughs Gold	....	25	....	....
Central Gold	....	20	....	....
Crozier Gold	2	10	....	....
Columbian G. & S.	3 55	3 60	3 20	3 20
Consolidated Colorado	....	10	....	15
Consolidated Gregory	8 90	8 95	8 85	8 90
Corydon	6 05	6 10	7 20	7 45
Des Moines Gold	....	75	....	....
Downieville Gold	....	20	....	10
Gilpin Gold	....	3 00	....	....
Gold Hill	3 00	4 00	....	4 00
Gunnell Gold	4 70	4 95	3 25	4 25
Gunnell Union	....	45	....	25
Grass Valley	....	1 75	....	....
Holman	10	20	15	18
Hope Gold	....	....	....	50
Keystone Silver	....	1	....	1
Kipp & Buell Gold	40	....	65	75
La Crosse Gold	40	50	40	50
Liebig	30	....	....	....
Liberty Gold	3	5	4	5
Montana Gold	70	....	....	40
New York	60	1 00	50	80
Nye Gold	3	....	4	5
Ohio & Colorado G. & S.	75	....	90	95
People's G. & S. of Cal.	75	....	60	70
Quartz Hill	2 05	2 20	2 05	2 08
Reynolds Gold	3	8	....	10
Rocky Mountain Gold	1 00	1 10	50	1 00
Smith & Parmelee Gold	5 70	5 95	....	4 75
Sensenderferfer	....	10 40	9 00	10 00
Symonds Fork	1 50	....	....	2 00
Texas Gold	16	18	....	30
Yellow Jacket Gold	....	....	....	50

Copper Stocks.—500 shares of Davidson sold, b.5, at $1 05, and 500, s.3, at $1.

	April 18.		April 26.	
	OFFERED.	ASKED.	OFFERED.	ASKED.
Caledonia	....	....	....	15 00
Charter Oak Copper	1 95	....	2 05	2 15
Davidson Copper	1 35	1 40	1 00	1 10
Hilton Copper	....	....	....	....
Isle Royal Copper	....	8 00	....	8 00
Ogima Copper	....	6 00	....	....

Petroleum Stocks.—

	April 18.		April 26.	
	Offered.	Asked.	Offered.	Asked.
Bennehoff Run	....	3 60	3 00	3 50
Buchanan Farm	....	....	15	20
Central	....	....	50	1 00
Clinton Oil	....	....	....	1 50
Cherry Run Special	....	....	....	....
Excelsior	....	....	....	15
Manhattan	....	.	....	15
N. Y. and Alleghany	....	....	2 50	4 50
Pit Hole Creek	....	....	....	50
Rynd Farm	....	....	7	20
United Pet. Farms	....	....	5	....
United States	....	....	3 25	4 25

Miscellaneous Stocks—Wells, Fargo & Co., 66@70; Merchants' Union, 12; Rutland Marble, $5; Quicksilver, 28¾; Spring Mountain Coal, 45; Cumberland Pref., 30; Pacific Mail 126⅞@127.

Lead Stocks.—At first 800 shares sold at 50c.; at second call 55c. was obtained.

Government Stocks—Firm and active, principally in home transactions.

U. S. 6s, 1867	137¼@ —
U. S. 6s, 1868, coupon	136 @ —
U. S. 6s, coupons, 1881	109¾@109¼
U. S. 5-20s, 1862, coupon	109¾@110
U. S. 5-20s, 1864, coupon	108¾@108¾
U. S. 5-20s, 1865, coupon	108¾@108⅞
U. S. 5-20s, 1865, coupon, new	107⅜@107½
U. S. 10-40 coupon	98⅜@ 98¾
U. S. 7-30, 1st	106¼@106¼
" 2nd	105⅝@105¾
" 3rd	105⅞@105¾

Foreign Exchange is firm. Bills at 60 days on London are quoted at 108@109¼ for commercial; 109¼@109⅞ for bankers'; do. at short sight, 110¼@110½; Paris, at 60 days; 5.22½@5.15; do. at short sight, 5.15@5.12½; Antwerp, 5.22½@5.15; Swiss, 5.22½@5.15; Hamburg, 35⅞@36⅜; Amsterdam, 40¾@41⅜; Frankfort, 40¾@41⅜; Bremen, 78¼@70½; Prussian thalers, 70¾@72½.

Gold—138¾@139½.

Copper—The market is quiet, with steady prices, ranging from 24@24¼c., according to brand.

Iron—For American Pig the demand for consumption has been quiet. No. 1 ranges from $42; No. 2, from $38. No change in retail prices, which Wm. Osthout, of Cliff street, reports as follows: Swedish Iron, $155@165; common, $95@100; refined, $105@110; band, $137½; rods, 3-16 to ⅝, $110@170; scroll, ⅝ to ⅞, $187½@137½; horseshoe, $132½@137½; hoop, ½ to 2, $142½@200; ovals and half ovals, 1½ to 1½, $132½@142½; nail-rods, $90@101¼.

Tin easier both here and in Europe. We quote Straits at 21¾@22c., gold.

Lead—We quote it at 6½@6¾c. There have been some transactions of importance, owing to an improper condition of the European market.

Spelter—We quote it at 6¾@6¾c Market firm.

Petroleum is dull and steady. We quote crude 40@47 gr. in bulk, 11¼c.; do. in bbls. 15½c.; refined, in bond, 110; test, light straw, 24c.; do. do. light straw to white, 24½c.; do. prime light straw to white, 25c.; do. standard white, 26½c.; prime white, 28¼c.

THE SLATE TRADE.

Business is improving, and prices are somewat firmer. We anticipate livelier times henceforth.

Roofing Slate.

Vermont purple,	1st quality, per	square	$11 00@12 00
" "	2d " "	"	10 00@11 00
" green,	1st " "	"	11 50@12 50
" "	2d " "	"	10 50@11 50
" red,	1st " "	"	12 50@13 50
" "	2d " "	"	11 50@12 50
Pa. bl'k & d'k blue,	1st " "	"	10 50@11 50
" " "	2d " "	"	9 50@10 50

PRICES DELIVERED. PER SQUARE.

CHICAGO.—Vermont purple and green,	1st qual.		....	$14 00@15 00
" " "	"	2d	"	13 00@14 00
" " red	"	1st	"	15 00@16 00
" " "	"	2d	"	14 00@15 00
Penn. black	"	1st	"	15 50@16 50
" "	"	2d	"	14 50@15 50

BUFFALO.—$2 or $3 lower than Chicago.
CLEVELAND.—$1 higher than Buffalo.
CINCINNATI.—50 cents higher than Cleveland.
NEW ORLEANS.—$19@20 per square.
CHARLESTON, S. C.—$15@16 per square.

THE COAL TRADE.

The principal feature of the week was the Scranton sale, which took place on Wednesday last. There was a large attendance of buyers, and the coal sold rapidly. 80,000 tons were disposed of at prices showing a slight advance on those attained at the sale of March 27. Below will be found a complete report of the sale, with a comparison of prices:

April 24.		March 27.	
LUMP.			
10,000 Tons.		13,000 Tons.	
1,000 tons	$4 37½	3,200 tons	$4 12½
9,000 tons	4 35	8,500 tons	4 25
		2,300 tons	4 30
STEAMBOAT.			
12,000 Tons.		8,800 Tons.	
10,500 tons	$5 10	7,000 tons	$5 00
1,000 tons	5 12½	1,500 tons	5 12½
500 tons	5 15	300 tons	5 20
GRATE.			
19,000 Tons.		16,000 Tons.	
5,350 tons	$5 05	3,350 tons	$5 05
2,900 tons	5 10	4,850 tons	5 10
10,100 tons	5 15	3,800 tons	5 12½
650 tons	5 20	4,000 tons	5 15
		100 tons	5 25
EGG.			
9,000 Tons.		14,500 Tons.	
5,050 tons	$4 75	11,700 tons	$4 75
300 tons	4 77½	1,400 tons	4 77½
2,900 tons	4 80	200 tons	4 78
100 tons	4 85	2,250 tons	4 80
200 tons	4 90	650 tons	4 87½
150 tons	5 00		
300 tons	5 05		
STOVE.			
20,000 Tons.		18,000 Tons.	
8,900 tons	$5 05	5,700 tons	$5 00
1,650 tons	5 07½	4,800 tons	5 05
8,950 tons	5 10	7,100 tons	5 10
300 tons	5 15	300 tons	5 12½
200 tons	5 20	1,850 tons	5 15
		100 tons	5 20
		200 tons	5 25
CHESTNUT.			
10,000 Tons.		9,000 tons.	
5,900 tons	$4 12½	4,950 tons	$4 05
4,000 tons	4 15	900 tons	4 07½
100 tons	4 20	1,750 tons	4 10
		1,300 tons	4 12½
		100 tons	4 15

April 24.			March 27.		
Lump	$4 35	@$4 37½	Lump	$4 12½	@$4 30
Steamboat	5 10	@ 5 15	Steamboat	5 00	@ 5 20
Grate	5 05	@ 5 20	Grate	5 05	@ 5 25
Egg	4 75	@ 5 05	Egg	4 75	@ 4 87½
Stove	5 05	@ 5 20	Stove	5 00	@ 5 25
Chestnut	4 12½	@ 4 20	Chestnut	4 05	@ 4 15

The sales seemed to revive the market and an increased activity has been noticeable during the past two days. Many dealers were waiting the result of this sale, believing that coal would recede; but agreeable to the prediction made by the JOURNAL OF MINING last week, that they would wait to their sorrow, such was not the case. The trade this spring has been unusually light. There is only one reason for this—the great reduction in consumption by manufacturers. Retail dealers in this and adjacent large cities have very light stocks on hand, many of them keeping their trade by a system of borrowing. We believe that the present prices will be maintained firmly through the season and advise those needing coal to supply their wants.

In our mining summary of this week will be found the latest intelligence from the various coal districts.

Foreign and Provincial coals are very quiet, and we hear of but few sales. Prices, up to yesterday, had a drooping tendency, but the war news caused holders to be firmer.

Domestic freights are firmer, and in some instances show a slight advance.

The following is the quantity of coal shipped over the principal roads for the week ending April 20, 1867:

	1866.		1867.		
	WEEK.	TOTAL.	WEEK.	TOTAL.	DECR'SE
Phil. & Reading R.R.	69,521	985,534	74,239	865,632	119,902
Schuylkill Canal	36,005	172,288	25,351	119,318	53,970
Lehigh Val. R. R.	25,447	580,923	37,843	468,534	112,388
Lehigh Canal	33,392	53,790	16,027	25,686	28,104
Del & Hudson	42,470	68,775	42,900	150,605	81,830
Scranton North	8,706	164,761	6,431	165,429	768
Scranton South	22,575	271,092	27,939	369,250	98,158
Penn'a. Coal Co. Rail	.....	100,719	19,200	178,735	78,016
" " Canal	.....	.....	802	1,490	.....
Wyoming North	.....	5,514	173	.....	.....
Wyoming South	.....	.....	.....	.....	.....
Shamokin	.....	126,669	8,777	118,632	8,037
Trevorton	1,363	12,353	148	5,042	7,311
Short Mountain	46	6,183	.....	5,006	1,177
L. V. Co	1,308	4,047	1,297	10,261	6,214
Broad Top	.....	61,549	5,787	63,126	1,577
Williamstown	.....	.....	1,100	12,428	.....
Total	240,833	2,554,197	267,214	2,499,174	.....
Cor'ng time last year	.....	.....	.....	.....	.....
Decrease	.....	901,573	.....	.....	.....

Schuylkill Coal Trade.

BY RAILROAD & CANAL, FOR WEEK ENDING APRIL 25, 1867.

	Railroad.	Canal.
St. Clair	29,551	.....
Port Carbon	10,613	.....
Pottsville	172	.....
Schuylkill Haven	18,036	.....
Auburn	2,918	.....
Port Clinton	12,949	.....
Total for week	74,239	25,351
Previously this year	791,393	93,967
Total	865,632	119,318

Lehigh Coal Trade.

SHIPPED FOR THE WEEK ENDING APRIL 22, 1867.

SHIPPERS.	CANAL. Week. Tons.	CANAL. Total. Tons.	RAILROAD. Week. Tons.	RAILROAD. Total. Tons.
Lehigh Coal & Navigation Co.	555	346	....	....
Packer, Skeer & Co.	.....	.....	.....	.....
John Laubach & Co.	.....	.....	2,115	33,875
E. S. Silliman	.....	.....	.....	.....
Thomas Coal Co.	.....	.....	161	6,214
Williams & Herring	.....	.....	65	3,909
W. T. Carter & Co. (Coleraine)	.....	.....	891	29,237
Spring Mountain Coal Co.	.....	96	...	....
Thomas Hull & Co. (N. Y. & Lehigh Co)	.....	.....	873	22,805
Honey Brook Coal Co.	91	91	1,135	31,393
German Pennsylvania Coal Co.	.....	.....	170	8,266
McNeal Coal and Iron Co	.....	.....	2,139	24,215
Knickerbocker Anthr. Coal Co.	.....	96	1,306	18,088
North Mahany Mines (Mahanoy Col. now B. & C.	.....	.....	777	4,280
Delano do	95	95	840	22,262
Primrose Mines (Rathbun, Stearns & Co.)	.....	.....	354	12,974
Walter, Brothers & Co. (now Bedford & Cox)	.....	.....	....	....
Mount Etna Coal Co.	.....	.....	....	58
Trenton Coal Co.	.....	.....	194	722
Glendon Coal Co. (Glendon Colliery)	.....	.....	474	7,014
East Boston	.....	.....	....	505
H. B. Hillman & Co	.....	.....	153	4,312
Bowkley, Price & Co.	.....	.....	52	1,411
A. Pardee & Co. (Hazleton)	2,036	2,750	4,118	9,366
G. B. Markle & Co. (Jeddo)	1,502	1,955	3,500	15,631
Wm. S. Halsey & Co. (Mt. Pleasant)	.....	.....	....	342
Buck Mountain Coal Co.	2,132	3,670	1,044	8,233
Sharpe, Weiss & Co. (Council Ridge)	1,078	2,114	2,016	15,614
Coxe, Brothers & Co. (Cross Creek)	283	379	952	2,891
Ebervale Coal Co	1,080	1,601	1,772	4,861
Stout Coal Co.	548	091	1,458	2,245
Harleigh Coal Co	477	477	1,092	2,190
Ashburton Coal Co.	.....	.....	....	37
U. Lehigh & Co.	65	65	1,422	5,401
T. F. Hunt & Co	.....	.....	56	574
East Sugar Loaf	.....	.....	4,110	11,924
Baltimore Coal Co	844	1,122	164	20,064
Wilkes Barre Coal and Iron Co.	2,516	4,663	365	34,283
Franklin Coal Co	179	465	89	7,094
Audenried Impr'v't & Coal Co.	156	469	....	3,079
Germania Coal Co.	90	181	220	7,278
Lehigh & Susquehanna Coal Co.	93	284	280	8,397
New Jersey Coal Co.	130	130	293	7,117
Warrior Run Mining Co.	376	472	74	4,022
Union Coal Co	692	1,063	....	6,964
Wyoming Coal & Transp'n Co.	464	831	21	11,222
Parish & Thomas	85	85	498	16,440
Newport Coal Co	377	655	39	386
Other Shippers	280	375	....	53
Everhart Coal Co	91	152	....	193
Beaver Meadow (D. W.)	.....	.....	....	58
John Connery	.....	.....	117	1,148
Total	.....	.....	37,843	468,534
Total by Rail and Canal	.....	.....	53,870	494,220

Cumberland Coal Trade by Railroad.

Statement of Coal Shipments over the Baltimore & Ohio Railroad for the week ending April 20:

	Tons.
From Cumberland & Pennsylvania R. R.	
American Company	1,087 10
Consolidation Co.	2,191 09
Bordeo	1,293 18
From Eckhart R. R.	
C. C. & I. C.	240 17
Blaen Avon Company	213 08
Total	5,025 02
GAS COAL.	Tons.
From Mines West of Piedmont	3,230 00

CUMBERLAND AND PENNA. RAILROAD.—There have been transport-

ed over this road the present season, up to 13th April, 129,206 tons 17 cwt. of coal—of which 111,902 06 were delivered to the B. and O. Railroad, and 17,304 11 to the Canal. As compared with the corresponding period of last year, there was an increase of 9,537 tons 16 cwt. to the Railroad, and 17,304 tons 11 cwt. to the Canal.

TRADE ON THE CANAL.—There were dispatched from the port of Cumberland during the last week 104 boats, laden with 11,205 tons of coal, forwarded by the following companies:

American	3,630 07
Bordon	1,348 00
Central	3,362 06
Hampshire	1,439 00
Cumberland Coal and Iron	761 10
Miscellaneous	663 11
	11,205 01

Lehigh and Mahanoy Coal Trade,

For week ending April 20, 1867.

NAMES OF SHIPPERS.	WEEK.	TOTAL.
Trenton Coal Co.	194 10	722 18
Mount Etna	.....	43 04
Mahanoy Coal Co.	967 08	4 481 04
Delano Colliery	721 18	22,457 12
Glendon Coal Co.	325 08	7,025 14
Rathburn, Stearns & Co.	493 15	12,916 10
E. S. Silliman	2,109 05	34,216 12
McNeal Coal & Iron Co.	2,542 09	24,382 06
Knickerbocker Coal Co.	1,557 01	18,680 18
Thomas Coal Co.	134 19	6,068 03
Williams & Herring	163 17	3,993 11
New Boston	903 00	903 00
Other shippers	.....	10 02
Total	10,313 10	135,901 14
Corresponding week last year	6,698 08	81,399 15
Increase	3,615 02	54,501 19
Decrease	.....	.....

Prices of Coal by the Cargo.

[CORRECTED WEEKLY.]

At New York, April 26, 1867.

Schuylkill Red Ash, choice	$6 25@$6 50
" Ordinary	5 50 6 00
" White Ash Lump	5 50 5 75
" Steamboat	5 50 5 75
" Broken	5 50 5 75
" Egg	5 50 6 00
" Stove	5 50 6 00
" Chestnut	4 75 5 00
Lehigh White Ash Lump	5 75 ....
" Broken	5 50 ....
" Egg	5 50 ....
" Stove	5 75 ....
" Chestnut	5 00 ....
Wilkesbarre Lump	5 25 ....
" Broken & Egg	5 50 ....
" Stove	5 75 ....
" Chestnut	5 25 ....
Wyoming Lump	5 00 ....
" Steamboat	5 25 ....
" Stove	5 50 ....
" Chestnut	4 75 ....
SPECIAL COALS.	
Diamond Vein Red Ash, Schuylkill	6 25 ....
Locust Dale White Ash, "	5 75 ....
Honey Brook " " Lehigh	5 75 ....
Sugar Loaf " " "	5 75 ....
Room Run " " "	5 75 ....
Old Company's " " "	5 75 ....
Harleigh " " "	5 75 ....
Spring Mountain " "	5 75 ....
Sugar Creek " " "	5 75 ....
Silver Brook " " "	5 75 ....
Fulton White Ash	5 75 ....
Stout	5 75 ....
Buck Ridge " " Shamokin	5 75 ....
Spohn & Lewis	6 50 ....
Shenandoah	5 75 ....
Swatara Falls, Red Ash	6 00 ....
Henry Heils, E. Franklin, Lorberry	6 00 ....
New England Red Ash	5 75 ....
Broad Mountain	5 50 ....
Wyoming	5 50 ....
McNeal Co.	5 75 ....
George's Creek (Balt.)	5 25 ....
" " (Georgetown)	5 00 ....
Locust Mountain (Repplier)	5 75 ....
Duncan Red Ash "	6 25 ....
Blossburg & Fall Creek	6 25 ....
New Burgh Orrell Gas Coal	9 50 ....
Despard Gas Coal	9 00 ....
Westmoreland Gas Coal	10 00 ....
Wilkesbarre Coal & Iron Co.	5 50 ....

Agents for these Coals may be found in our advertising columns

At Philadelphia, April 26, 1867.

Lehigh Lump and Steamboat	$5 25@.. ..
" Broken and Egg	5 00 5 25
" Stove	5 00 5 25
" Chestnut	4 75 .. ..
Schuylkill Red Ash Prepared	5 00 5 50
" Chestnut	3 50 .. ..
" White Ash Lump and Steamboat	4 25 4 50
" Broken	4 25 .. ..
" Egg and Stove	4 25 @4 50
" Chestnut	3 75 4 00
Locust Mt. Lump, and Steamboat	4 25 5 00
" Broken	4 35 .. ..
" Prepared	4 50 .. ..
" Chestnut	3 50 .. ..
Lorberry Coal	4 75 ..
Shamokin	5 00 .. ..
Franklin, (Lykens Valley)	5 00 .. ..
Broad Top	5 00 5 25

Scranton Coal at Elizabethport, April 26, 1867.

Lump	$4 50@— —
Steamer	5 50 — —
Grate	5 50 — —
Egg	5 25 — —
Stove	5 50 — —
Chestnut	4 50 — —

Prices for Pittston Coal at Newburgh, April 26, 1867.

Lump, per ton of 2240 lbs	$5 30 .. ..
Steamer, " " "	5 30 .. ..
Grate " " "	5 35 .. ..
Egg " " "	5 45 .. ..
Stove " " "	5 70 .. ..
Chestnut " "	4 50 .. ..

70 cents additional to New York.

Lackawanna at Rondout, April 26, 1867.

(Average contract prices for year.)

Lump	5 00 @.. ..
Steamer	5 10 @.. ..
Grate	5 30 @.. ..
Egg	5 40 @.. ..
Stove	5 55 @.. ..
Chestnut	4 60 @.. ..
Pea	4 00 @.. ..

Lehigh Coal at Elizabethport, April 26, 1867.

Lump	5 75@.. ..
Steamboat and Broken	5 50 — —
Egg	5 00 — —
Chestnut	5 00 — —
Stove	5 75 — —

At Baltimore April 26, 1867.

Wilkesbarre & Pittston W. A., wholesale	$7 00@$7 25
" " " retail	7 75 8 00
Lykens Valley & Sunbury R. A., wholesale	7 00 7 25
" " " retail	7 75 8 00

George's Creek and Cumberland Coal.

Run of mine, f. o. b. at Locust Point	$5 25@.. ..
At Georgetown	5 00 .. ..

Wilkesbarre Coal and Iron Company's Coals.

Lump	5 00 .. ..
Steamer	5 25 .. ..
Broken	5 30 .. ..
Egg	5 30 .. ..
Stove	5 50 .. ..
Chestnut	4 75 .. ..

(From the Mercantile Gazette.)

At San Francisco, April 16, 1867.

Duty Bituminous $1.25. Other kinds 40 cents per ton

Australian	$12 00@ ....
Do Wallsend	12 00 13 00
Pittston, ton	14 50 .. ..
Lehigh	17 00 .. ..
Cumberland, cks	.... 27 00
do bulk	23 00 .. ..
Scranton	14 50 .. ..
Liverpool	13 00 .. ..
Scotch	14 00 .. ..
West Hartly	14 00 .. ..
Vancouver Island	13 00 .. ..
Bellingham Bay	10 00 .. ..
California	6 00 8 00

Prices of Provincial Coals.

[REPORTED FOR THE JOURNAL OF MINING.]

BY LOUIS J. BELLONI, JR., 43 Pine street, N. Y.

Duty $1.25 per ton.

Block House (on board)	$2 00 gold
Gownie "	1 75 "
Lingan "	1 75 "
Sidney "	2 25 "
Pictou "	2 25 "
Glace Bay "	1 87½ "
International Co.'s "	1 75 "
Slack Coal "	75@1 00 "

Prices of Foreign Coals.

[REPORTED FOR THE JOURNAL OF MINING.]

BY H. L. PARMELE & BRO., 32 Pine street, N. Y.

Duty $1.25 per ton.

Liverpool Gas Caking	$10 50
" " Cannel	13 00
" House "	16 00
" " Orrel	16 00

Per ton 2240 lbs.

PRICES FROM YARD:

Liverpool Orrell, screened	20 00
" Cannel, "	22 00

per ton 2000 lbs. delivered.

Coal Freights.

(Corrected Weekly.)

From Port Richmond, Philadelphia.

Albany (& towing)	—	—	@	—	Mobile	4 00	— —
Alexandria	—	—		—	Middletown	1 40	— —
Amesbury Point	—	—		—	Mantucket	2 75	— —
Appanoag	—	—		—	Medford	3 00	— —
Aspinwall	—	—		—	Marblehead	2 50	— —
Bangor	—	—		—	Machiasport	2 50	— —
Bath	—	—		—	Neponsett	2 75	— —
Baker's Landing	—	—		—	New Bedford	2 25	— —
Bedford	—	—		—	Newburg	1 00	— —
Belfast	2 47	2 50			Newburyport	2 80	— —
Boston	2 50	—		—	New Haven	2 00	— —
" bridges	03	—		—	New London	2 25	— —
Bridgeport	1 75	—		—	Newport	2 25	— —
Bristol	—	—		—	Newport, R. I.	2 10	— —
Beverly	2 50	—		—	New York	1 25	1 45
Calais	3 50	2 78			Norfolk & tow	1 50	— —
Cambridge	3 00	—		—	Norwalk	1 45	— —
Catskill (& tow)	2 00	—		—	Norwich & tow	2 25	— —
Charleston, S. C.	2 25	—		—	Pawtucket and tow	2 40	— —
Charlestown	2 70	—		—	Petersburg	2 00	— —
Chelsea	2 50	—		—	Philadelphia	—	— —
Commercial Point	2 75	—		—	Portland	2 50	2 65
Cohasset Narrows	2 75	—		—	Portsmouth	—	2 65
Daversport and dis.	2 50	—		—	Providence	2 00	— —
Delaware City	80	—		—	Provincetown	2 05	2 60
Dighton	2 30	—		—	Poughkeepsie, & t'g	1 60	— —
Dover	2 90	—		—	Port Chester	1 60	— —
Deer Plain	2 75	—		—	Plymouth	2 75	— —
East Cambridge	2 75	—		—	Richmond, Va.	2 00	— —
East Greenwich	2 25	—		—	Roxbury	2 65	2 85
Elizabethport	—	—		—	Rockland	2 92	— —
Fall River	2 00	—		—	Saugus	2 50	— —
Fort Monroe	1 60	—		—	Sing Sing	1 60	— —
Fredericksburg	1 75	—		—	St. Johns (in gold)	2 00	— —
Fair-Haven	2 00	—		—	Salem	2 50	— —
Gardiner	3 00	—		—	Savannah, Ga.	2 25	— —
Georgetown	1 60	—		—	Stonington	2 25	— —
Gloucester	2 75	—		—	Saco	1 80	— —
Greenpoint Towing	1 45	—		—	Salisbury	3 00	— —
Greenport	2 00	—		—	Thomaston	2 60	— —
Hartford	2 75	—		—	Taunton	2 50	— —
Hudson	1 40	—		—	Washington, D. C.	1 60	— —
Haverhill	3 45	—		—	West Point & tow	1 70	— —
Key West	2 50	—		—	Wilmington	1 00	— —
Lynn and dis.	2 75	—		—	Williamsburg	2 87	— —
Milton	3 85	—		—	Winterport	2 00	— —
Malden	3 20@	—		—	Yarmouth	3 12½	— —

From Elizabethport.

Albany	$1 00@	—		—	New London	1 25@	— —
Boston	1 75	1 80			Newport	1 50	— —
Bridgeport	1 00	—		—	New York	55	— —
Fall River	1 50	—		—	Norwalk	1 00	— —
Hartford	1 50	—		—	Norwich	1 30	— —
Hudson	1 00	—		—	Pawtucket	1 75	— —
Lynn	—	—		—	Portland	2 00	— —
Middletown	1 25	—		—	Portsmouth	2 15	— —
New Bedford	1 40	—		—	Providence	1 50	— —
Newburyport	2 25	—		—	Salem	2 00	— —
New Haven	1 00	—		—	Taunton	1 40	— —

From Rondout.

RIVER.		EASTERN.	
Albany	50@.. ..	Boston	2 10@.. ..
Barrytown	35	Bridgeport	1 35 .. ..
Catskill	40	Bristol	1 50 .. ..
Cold Spring	30	Dighton	1 55 .. ..
Coeymans	50	Fall River	1 50 .. ..
Coxsackie	45	Mystic	1 40 .. ..
Fishkill Landing	20	New Haven	1 30 .. ..
Greenbush	55	New London	1 40 .. ..
Haverstraw	45	Newport	1 50 .. ..
Hudson	45	Norwalk	1 25 .. ..
New York	65	Norwich	1 50 .. ..
Nyack	55	Pawtucket	1 75 .. ..
Peekskill	45	Providence	1 55 .. ..
Poughkeepsie	30	Stamford	1 30 .. ..
Rhinebeck	35	Stonington	1 40 .. ..
Saugerties	45	Warren	1 55 .. ..
Sing Sing	55		
Stuyvesant	50		
Tarrytown	55		
Troy	65		
West Point	35		
West Troy	60		
Yonkers	55		

From Newburgh.

RIVER.	Co.'s BOATS.		EASTERN.	
Albany	50@.. ..		Boston	1 75@.. ..
Barrytown	35		Bridgeport	1 12½ .. ..
Catskill	36		Bristol	1 40 .. ..
Cold Spring	30		Dighton	1 45 .. ..
Coeymans	45		Fall River	1 40 .. ..
Coxsackie	40		Mystic	1 30 .. ..
Fishkill Landing	20		New Haven	1 12½ .. ..
Greenbush	50		New London	1 30 .. ..
Haverstraw	45		Newport	1 40 .. ..
Hudson	35		Norwalk	1 12½ .. ..
New York	70		Norwich	1 40 .. ..
Nyack	50		Pawtucket	1 65 .. ..
Peekskill	40		Providence	1 45 .. ..
Poughkeepsie	25		Stamford	1 12½ .. ..
Rhinebeck	30		Stonington	1 30 .. ..
Saugerties	35		Warren	1 45 .. ..
Sing Sing	50			
Stuyvesant	40			
Tarrytown	50			
Troy	55			
West Point	30			
West Troy	55			
Yonkers	55			

From Georgetown or Alexandria.

To Philadelphia	$1 60	— —	Boston	3 00	3 25
New York	2 25	2 50	Sound Ports	2 75	3 00

From Baltimore.

To Philadelphia	$1 40@	1 50	Boston	3 00@	3 25
New York	2 25	2 50	Sound Ports	2 75@	3 50

Provincial Freights.

	Currency.
Sydney to N. Y.	$3 50
Lingan	3 75
Cow Bay	3 75
Big Glace Bay	4 50
Little "	3 50

Foreign Freights.

New Castle and Ports on Tyne	18£@ keel.
Liverpool	11s.@ 12s.6d.

Rates of Transportation to Tide Water.

[BY RAILROAD.]

To Port Richmond.

Transportation from Schuylkill Haven to Pt. Richmond	$2 00
Freight from Pt. Richmond to New York	1 50
Total	$3 5
Drawback	50
	3 00

From Port Carbon 8 cents per ton more.

To Elizabethport

L. V. R. R. from Mauch Chunk to Easton	$ 81
C. R. R. of N. J., Easton to Elizabethport	1 22
	2 03
Shipping expenses at Elizabethport	28
Total	$2 31

To Port Johnson.

L. V. R. R.	$ 81
C. R. R. of N. J.	1 29
Shipping Expenses	25
Total	$2 35

To Hoboken.

L. V. R. R.	$ 81
Morris and Essex R. R.	1 29
Shipping Expenses	25
Extra to N. Y. or Hudson River Shipments	10
Total	$2 45

[BY CANAL.]

To Port Richmond.

From Schuylkill Haven to Port Richmond	$1 00
Freights and tolls by Raritan Canal	2 20
	$3 20
Drawback	20
Total	$3 00

To New York.

From Mauch Chunk to New Brunswick—	
By Lehigh: Del. Div. and Del. and Raritan Canal	90
Freights through	1 25
Towage	22
	$2 37

To New York via Morris Canal.

Lehigh Canal	34
Morris "	50
Towage	10
Freight	1 45
Total	$2 39

Expenses from Mauch Chunk to Jersey City for Re-shipment.

Lehigh tolls (net)	34
Morris "	41
Freight	1 40
Re-shipping	30
Total	$2 45

BOSTON STOCK MARKET.

(By Telegraph.)

BOSTON, April 26, 1867.

Prices bid to-day were as follows:

Canada	40c.	Minnesota	..
Copper Falls	24	Quincy	23
Franklin	19	Cary Improvement	9¼
Hancock	5⅛	Rockland	..
Huron	7½	Water Power	30⅞
Isle Royal	7¾	Central	..

Sales at Boston Stock Exchange, April 25.

150 shs	Water Power		29⅞	1500 shs	Ophir	G.b.30	2¼
800 do	do		30	1400 do	do	2	20
50 do	do		30⅛	50 do	Humboldt		1⅛
250 do	do		30¼	150 do	Huron		6½
400 do	do	b.30	31	50 do	do		6⅝
100 do	do	b.10	30⅞	50 do	do		7
15 do	do		31	100 do	do		7⅛
100 do	do		30⅛	50 do	do	b.40	7⅛
100 do	Bay State	b.30	5	SECOND CALL.			
150 do	do		4⅜	100 shs	Water Power		30⅛
425 do	Cop. F's		24	100 do	do	b.30	31
200 do	do	b.60	25	250 do	do		30⅛
15 do	Franklin	b.	20	100 do	do	b.30	30¾
100 do	Isle Royal		8	15 do	do		30⅝
100 do	do	b.60	8⅜	100 do	do	b.15	30½
100 do	Rockland		7⅝	100 do	Waverly		2¼
50 do	do		7⅞				

SAN FRANCISCO STOCK MARKET.

Latest by Telegraph.—April 23.

Name.	Bid per foot.	Name.	Bid per foot.
Gould & Curry	475	Crown Point	1375
Savage	2570	Yellow Jacket	1290
Chollar-Potosi	400	Belcher	240
Ophir	310	Alpha	380
Hale and Norcross	3000	Imperial per share	27c
Cal. Steam Navigation Co.	72	Cal. State Telegraph Co	30

Weekly Coal Trade Circular.

NEW YORK, April 26, 1867.

The coal trade moves along quietly. The Scranton auction sale of this week shows a slight advance in prices—indicating that bottom has been reached. This has produced a much improved feeling in the trade, and dealers have commenced to buy moderately. The strike in the Lehigh region has terminated and the mines are producing again; but after so prolonged a strike it will necessarily take some time before they get in full blast. Vessels are more plenty at Philadelphia and at Port Johnson, and shipments are being made with some degree of activity. If consumers were wise they would purchase coal *now*, whilst it is *so cheap*, and run no risk of having it go higher, which it is more likely to do than to go *lower*.

FOREIGN MARKET REVIEW.

Metal Report.

LONDON, E. C., April 5, 1867.

There is no improvement whatever in the position of the metal trade. Very little business has been done, and prices, with but few exceptions, have shown a declining tendency.

IRON.—The demand for Welsh iron is below the average; prices, however, are unaltered. At the preliminary meeting of the Staffordshire ironmasters, it was resolved to adhere to last quarter's quotations. Scotch Pig Iron has advanced slightly, closing at about 58s. cash.

COPPER.—Up to the present, business has been extremely dull; prices of English raw a matter of negotiation between buyer and seller. Burra is obtainable at £83, Wallaroo at £82 10s. Chili bars in Liverpool have been done at £71 10s. and €71 5s. The West India mail which arrived on Wednesday, has brought advices of shipment of only about 800 tons copper from Chili, which may strengthen our market.

TIN.—Very little business has been done, and holders are more willing to realize. Straits are now obtainable at £83, and Banca at £83 on the spot here. English Tin very quiet. The Dutch market is steady, at a shade under the sales' price.

TIN-PLATES are dull. At a meeting of the Tin-plate manufacturers held on Wednesday, at Gloucester, it was resolved to adhere to last quarter's quotations, but good charcoal was obtainable at 28s. in Liverpool; Coke, 2 s. to 26s.

LEAD.—The market is firmer. Good soft English Pig, £19. 15.; L B. £21 17s. 6d.

SPELTER.—The great reduction in stock has had no influence on prices, and parcels on the spot here are obtainable at £21 15s., while for forward delivery there are sellers at £21 10s.; Spelter, warehoused in outports, special brands, £21 15s; common, 5s. less.

VON DADELSZEN & NORTH.

Patent Claims.

Interesting to Miners, Millmen, Metallurgists, Oil-Men and Others.

The following claims have recently been issued from the United States Patent Office:

63,963.—APPARATUS FOR TREATING PETROLEUM.—Alexis Thirault, Williamsburg, N. Y., assignor to himself and B. S. Hilton, New York city. Antedated April 5, 1867.

First, I claim the arrangement of one or more steam jets a, in combination with the condensing coil A, constructed and operating substantially as and for the purpose set forth.

Second, The steam jets d, or d,' applied in combination with tanks C or C', and with the pipes carrying the oil into said tanks substantially as and for the purpose described.

Third, the jets d^8 or d^{8} in combination with the tanks C or C' constructed and operating substantially as and for the purpose set forth.

Fourth, The combination of the coil A, tanks C C' C^8, steam jets a d d^8 d' d^{8} and coils k i, all constructed and operating substantially as and for the purpose described.

63,979.—MACHINE FOR GRINDING AND AMALGAMATING ORES.—Philip Hinkle (assignor for himself and Charles S. Capp,) San Francisco, Cal.

First, I claim the employment of the renewable side dies, G G, to form a perpendicular grinding surface on the sides of the tub or pan, substantially in the manner and for the purpose described.

Second, The employment of the perpendicular muller hangers, F E, loosely hung on to the pins, C C, carrying the renewable mullers or grinding plates, F F, of the shape shown in the drawings, thrown and passed laterally by centrifugal force against the perpendicular grinding surface, G G, when the arms, B B, are revolved, with the supporting lip, I, and bearing surface, D, upon the arms, B B, by which arrangement the pressure is lightest at the feeling point and heaviest at the heel of the muller, and also the provision for loading the muller hanger to counterbalance the loss of weight by wear of the face of the muller, F, substantially in the manner and for the purpose described.

Third, The shape and arrangement of the cover of the pan, U, so as to form a flattened funnel-shaped dish, with annular grooves, S, for mercury and raised current breaking ring, W, on its upper surface, the collars or projecting flange, V, with the apertures, R R, under it, by which the escape of the pulp is permitted, and its current directed so that it is returned to the centre, and a continual circulation maintained.

63,789.—APPARATUS FOR REFINING AND DISTILLING PETROLEUM, ETC.—John Ellis, New York city, and Edward C. Hattell, Binghamton, N. Y.

First, we claim the using of steam and superheated steam for the purpose of separating and removing the more volatile from the less volatile portions of petroleum, kerosene, benzine, naptha and turpentine, while these fluids are in a state of spray or drops, as specified.

Second, the oil pipes, E, and K, and condensing tubes, D and I, when constructed and arranged in relation to each other, and a retort, as and for the purpose specified.

Third, The separating tank tub, or tube, in combination with an upper and under retort, for the purpose of separating the water and earthy impurities from the oil before the latter flows into the lower retort.

Fourth, The using in a retort scraps of metal wire, wire scives, nails, turnings or other metallic or earthen materials, or even vegetable substances, which will either form a screen or a porous mass through which oil can trickle down so as to expose a large surface of it to the action of heat.

Fifth, The using in a retort or retorts of a series of nearly or quite horizontal plates, shallow pans or shelves, which may be concave or with edges turned up, plain or convex, perforated with from one to numerous openings, to permit, in combination with the pipe, I, and coil, K, so as to expose a very large surface to the action of steam, and to form a very large evaporating surface.

Sixth, The using an agitator in a circular or nearly circular retort, for the purpose of throwing the oil into a spray or drops, so as to expose every drop as far as possible to the direct action of the heat, and allowing the oil or fluid being distilled to flow through the retort in a steady stream, but not to accumulate in any considerable quantity in the retort, substantially as represented in the drawings.

Seventh, The condensers, A M and Q, containing internally plates, discs, turnings, or an agitator into which the vapor of oil and cold water are allowed to flow for the purpose of condensing the vapor, substantially as represented in the drawings and described in the specification.

Eighth, The blowing the inflowing oil into a state of spray, by a current of steam, by allowing the steam to strike the stream of oil substantially as is represented by the oil pipe, n, and the dotted steam pipe, t, in the drawings of retort, L.

Special Scientific Brevities.

☞ **Naphthaline, collecting in our gas-pipes, gives** great trouble. It is, however, being gradually devoted to useful purposes, the difficulty of separating it from tarry matter without frequent sublimation having been removed. This is done as follows: The crude naphthaline, consisting of brown crystals, is mixed with twice its volume of quartz sand. A layer of this mixture, four inches deep, is placed on a water bath, and the powder is covered with a cloth. Over this a light wooden or paper box is placed for the vapor to condense in. Naphthaline volatilizes, although slowly, under the temperature of boiling water, and the product thus obtained is of great purity. The solid hard residue which remains after the sublimation is said to be applicable to many technical purposes, but we are not told what they are.

☞ **Dr. Jacobsen, of Hamburg, has invented a new** whitewash as durable as paint, and very beautiful. He dissolves 50 parts of glue in 150 parts of water. He then adds two parts of a solution of caustic soda, specific gravity 1.34, and boils. A flocculent precipitate separates, which may, however, be disregarded. When the above mixture has cooled, he adds fifty parts of commercial water-glass solution, and then stirs in enough oxide of zinc to give a proper consistence for painting. If necessary, the mixture must be passed through a mill to make it smooth. This composition, it is said, is well suited for either wood, metal or brickwork. Two coats should be laid on, and when they have perfectly dried, a solution containing ten per cent. of chloride of zinc should be applied. This will give a beautiful gloss, and great durability to the composition.

☞ **Some of our readers may like to have a process** for bleaching a solution of gum, a colorless solution of the kind recommending itself for most uses. The application of ordinary bleaching agents is in this case out of the question, but Piccioto states that mucilage may be completely decolorized by means of recently precipitated gelatinous alumina, which fixes the color on itself and leaves a clear solution. Unless the mucilage is very deeply colored, the alumina will serve for two operations.

☞ **A gun has been invented in France in which** electricity is very ingeniously applied to the ignition of the charge. Two small electric batteries are inclosed in the stock, the conducting wires of which emerge at the surface near the breech, and by a very simple means are connected at pleasure with a very fine platinum wire within the charge, so as to render it incandescent, and thus ignite the powder.

☞ **Glycerine is found to be an excellent material** for smearing plaster of Paris moulds before taking a cast. It is easily applied with a brush, and after the cast has set, it readily separates without the least danger of splintering or cracking. It is said to possess many recommendations over the soap and water usually employed for the same purpose.

☞ **A scientific expedition to explore Russian America** is being now organized. It will start probably in May. Prof. Baird, of the Smithsonian Institute, will, it is said, join the expedition.

Mineral and other On-dits.

☞ **We learn, by the Australian mail, that shipments** of Manganese from a mine near Gladstone, in Queensland, had been made.

☞ **Australian coal is said to be superior to that of** England. At a recent trial in Woolwich, Australian coal, from Lambton, evaporated more than 7½ lbs. of water per 1 lb. of fuel consumed, whilst Hartley coal, (the best in England,) evaporated less than 7⅔ lbs. the ashes from the Australian coal being 5.61lbs. per cwt., and 2.16 lbs. per cwt. from English.

☞ **The Pottsville *Standard* says that in the vicinity** of Orwigsburg there exists a peculiar substance, formerly called "Orwigsburg coal," which bears some resemblance to plumbago or black lead, and has been used for many years by carpenters and others instead of lead pencils, by merely sharpening it at the point. It makes a distinct mark, is soft, and not at all gritty.

☞ **The oil mania is reviving in the West Virginia** districts. The territory in that section has been but partially developed, and the present reaction may succeed in proving it much richer than the Pennsylvania regions.

☞ **The export of coal from England to the United** States, Italy and Brazil, declined last year.

☞ **Great quantities of coal have lately been dis**covered in the Val d'Ocia, in Sienna.

☞ **There is considerable competition at present** between Belgian and German coal.

☞ **Pithole, (Pa.) wells produce nine hundred and** twenty barrels of oil per day.

☞ **Platinum has been discovered in large quanti**ties in New Zealand.

☞ **The annual production of diamonds is estima**ted at $4,400,000.

All Sorts.

☞ **The Boston *Leader* says: "We have received a** letter from Mr. H. M. Lane, who has just visited the diamond mines of Brazil, and tells us that in taking the gems from the earth a driver places his gang of slaves in a mudhole where the gems are found, and pans out the earth in the water like gold washers. The negroes are naked, to prevent them secreting the diamonds in their clothes. They are required to work facing the overseer, and are forbidden to raise a hand to the face, lest they should swallow the jewels when found. Yet they do carry them away, by becoming so expert that they can snap them with their fingers from the pan to the mouth without detection."

☞ **Recently, a clergyman was preaching in Bel**fast, when a young man in the congregation, getting weary of the sermon, looked repeatedly at his watch. Just as he was in the act of examining his timepiece for the fourth or fifth time, the pastor, with great earnestness, was urging the truth upon the consciousness of his hearers. "Young man," said he, "how is it with you?" Whereupon the young man with the gold repeater hawled out, in hearing of nearly the whole congregation, "A quarter past eight." As may be supposed, the gravity of the assembly was much disturbed for a time.

☞ **Thought engenders thought. Place one idea** on paper, another will follow it, and still another, until you have written a page; you cannot fathom your mind. There is a well of thought there which has no bottom; the more you draw from it, the more clear and fruitful it will be. At first your ideas may come out in lumps, homely and shapeless; but no matter, time and perseverance will arrange and refine them.

☞ **The Japanese, it is said, have the art of feed**ing turtles and other crustacea on aurum potabile, or some liquid preparation of gold, which gives them a most gorgeous and gilded appearance. Several of these gold turtles and crabs are to be sent to the Paris Exhibition.

☞ **Advices from St. Michael, Savoy, state that the** works for piercing Mont Cenis have reached the limit of the bed of hard quartz, which has been so difficult to penetrate. The workmen have now come upon softer ground, and hope to be able to bore one thousand metres in a year.

☞ **A subterranean fire has broken out near the** sources of the Ain Baida, Algeria. A hot smoke issues from an aperture about three feet in diameter, and rises to a height of about fifteen to twenty yards. A stick plunged into the opening is carbonized in a few minutes.

☞ **Coal tar mixed with sand, to the consistency of** thick mortar, is an effectual stopper to ratholes. Or rats may be driven off by catching one, soaking him in coal tar, and then letting him run.

☞ **The Kansas branch of the Union Pacific railroad** from St. Louis is completed to Saline, a town fifty miles beyond Fort Riley, and four hundred and sixty-eight miles west of St. Louis.

☞ **A country editor, describing a new organ, says:** "The swell died away in delicious suffocation, like one singing a sweet song under the bedclothes."

☞ **England now spins and weaves enough cotton** to make nine times the circuit of the globe.

☞ **Better deserve honor and not have it, than have** it and not deserve it.

MORE PRESS NOTICES.

[*From the Millbrook Messenger, (C. W.) March* 27, 1867.]

AMERICAN JOURNAL OF MINING.—In this *golden* age, no one, having taken the mining fever, can do without this valuable publication. Useful to all.

[*From the Southeast Missouri (Ironton,) Enterprise, March* 30, 1867.]

THE AMERICAN JOURNAL OF MINING, published in New York City, by Western & Co., is among our most highly prized exchanges. The JOURNAL is a necessity to those of our citizens engaged in mining operations, and we hope to see it liberally patronized. Call at this office and see specimen copies.

[*From the Valparaiso (Ind.) Republican, March* 28, 1867.]

AMERICAN JOURNAL OF MINING.—This fine sheet, published at 37 Park Row, New York, by Western & Co., is very interesting to all concerned in mining. It has recently been enlarged to twenty pages, making it one of the largest papers in the country.

[*From the Prarie Telegraph, (Rensselaer, Ind.) April* 4, 1867.]

AMERICAN JOURNAL OF MINING.—This is a quarto of twenty pages. It is the largest and most comprehensive journal of mining on this continent, representing gold, silver, copper, iron, lead, coal, slate, oil and whatever else comes under the head of mining. Western & Co., New York; $4 per annum. This is an able scientific and historical journal, containing highly interest-

ng statistics on everything pertaining to its great leading feature of mines and minerals.

[*From the Portsmouth (N. H.) Chronicle, March* 23.]

In consequence of the success of the AMERICAN JOURNAL OF MINING, it will be enlarged to twenty pages with the number for the week ending March 30, when it begins its third volume. It furnishes a great deal of information, valuable in a country with such mineral wealth as our land can boast. Four dollars a year. Western & Co., publishers, 37 Park Row, New York.

[*From the Pottsville Standard, March* 23.]

We invite attention to the prospectus of the AMERICAN JOURNAL OF MINING in our advertising columns. This is the most complete and reliable publication of its kind in the country, and we commend it to the attention of all interested in mines or mining.

[*From the Pottsville Miners' Journal, March* 23.]

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NEW YORK, April 12, 1867.
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MESSRS. WILLIAM MULLANY AND GEO. W. ESSER, of the firm of Jno. White, Wholesale Coal dealer, No. 8 Wall street, New York City, and Mauch Chunk, Pa., retire from said firm to-day by mutual agreement.
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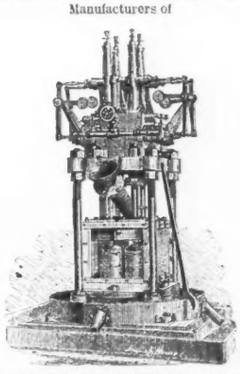

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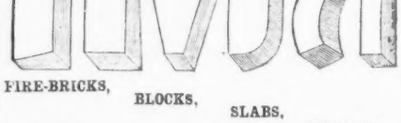

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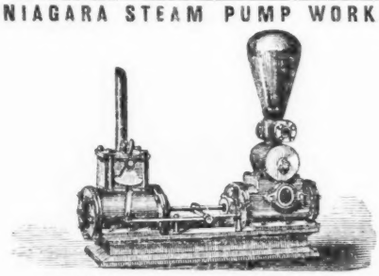

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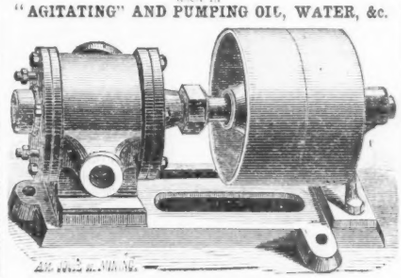

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Wigan, Law Clerk to the Association.
Feb. 11, 1867. 25:2-tf

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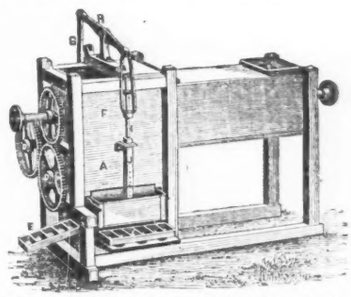

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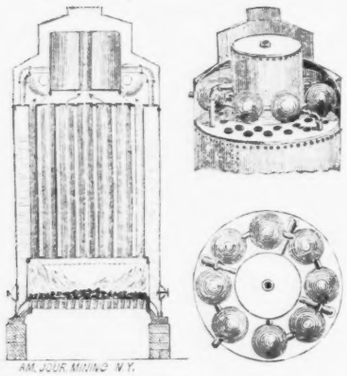

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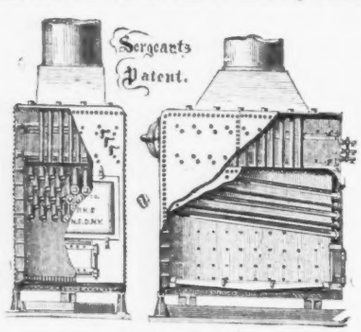

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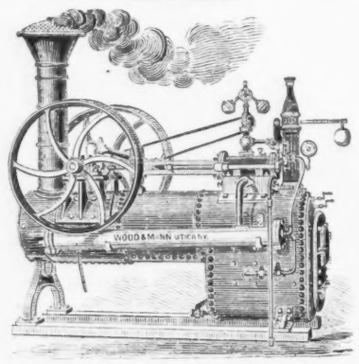

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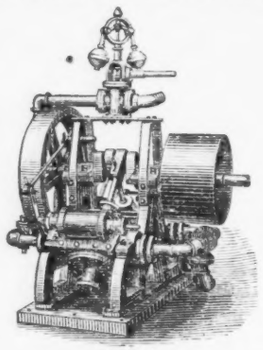

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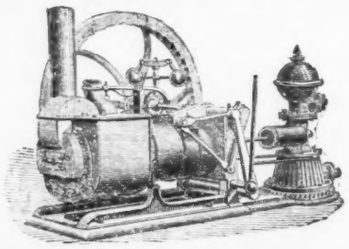

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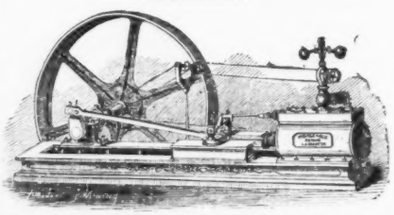

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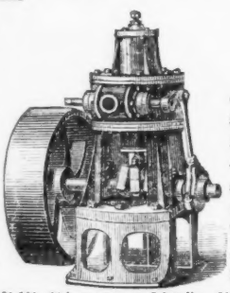

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